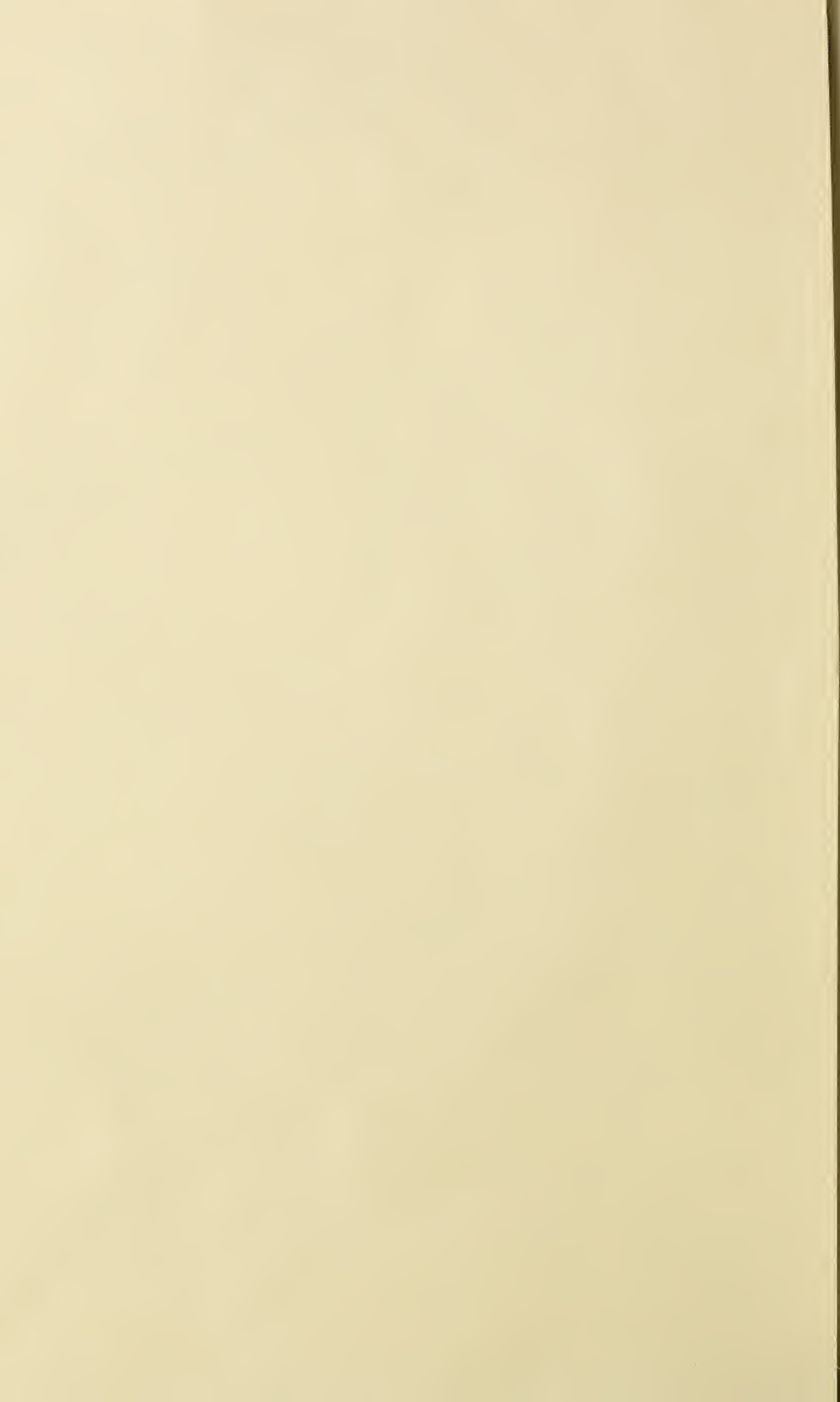


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GLEANINGS IN BEE CULTURE

NOVEMBER, 1919

BEEKEEPERS FACE A CRISIS

Sugar Shortage Now Demands Immediate Action in Many Sections of the Country. Just What Beekeepers Can and Should Do at Once.

The danger of starvation now threatens unnumbered thousands of colonies of bees in the eastern and central United States, because of an unprecedented sugar famine. It is nothing short of a catastrophe that menaces the beekeepers.

It was last month that we published a telegram from Dr. E. F. Phillips, explaining how beekeepers could obtain the much-needed sugar for winter stores. We regret to say that this arrangement has not worked out. It should be distinctly understood that this is due to no fault of the Sugar Equalization Board. As soon as the October Gleanings was out the Board was simply swamped with so many appeals for sugar that they were quite unable to supply the demand.

The situation, the country over, is that there is little or no sugar to be had, and there will be little before January 1st next.

Beekeepers are in the greatest need of sugar in New York, Pennsylvania, the New England States, North Carolina, Georgia, Ohio, Indiana, Illinois, and parts of Michigan, Wisconsin, Minnesota, Iowa, and perhaps elsewhere. Unless steps are taken immediately, disaster will follow.

This great sugar shortage has been caused by the unusual consumption of sugar brought about by prohibition and the tendency to use more sugar than ever as soon as the restrictions were removed. The consumption of sugar during the first nine months of the present year greatly surpassed the total amount consumed in 1918.

Of the vast amounts of sugar consumed in the United States, a great part of it is used east of a line running thru Buffalo and Pittsburg. According to a recent ruling, all cane sugar from the West Indies will be distributed east of this line. Therefore all beekeepers west of that line must depend on beet sugar (just now coming into the market) for wintering their bees, and all east of that line on cane sugar.

Those beekeepers east of Buffalo needing sugar to keep their bees from starvation should, if possible, combine for the purchase of sugar in carlots, as it can be obtained there in carlots—and in carlots only. Beekeepers in New York should send a telegram immediately to G. H. Rae, Extension Division, Cornell University, Ithaca, N. Y., stating their needs. Those in Pennsylvania should immediately telegraph to Prof. J. A. Sanders, Bureau of Plant Industry, Harrisburg, Pa. Everywhere else east of the Buffalo-Pittsburg line, beekeepers should club together and buy in carlots, sending their order directly to the United States Sugar Equalization Board, 111 Wall St., New York, naming one consignee.

West of this line beekeepers may wire directly to the beet-sugar refineries, if they club together and order in carlots. But it would be a much better plan to get in touch immediately with the local county agricultural agent, the state apiarist or state inspector and have him wire to one or more of the nearest sugar refineries stating the beekeepers' needs and giving financial references. In order to avoid delay it would doubtless be a good plan to name a bank as consignee. The sugar refineries or companies will insist that the beekeeper guarantee the sugar will be used for his bees only.

We know of one county agent who at the suggestion of the beekeepers of his county got busy without a moment's delay and has now obtained sugar from a nearby sugar refinery and is supplying the beekeepers of four counties with all the sugar needed. County agents elsewhere will do as much for the beekeepers if the beekeepers will at once appeal to them.

The list of beet sugar refineries which may be appealed to, is as follows: Continental Sugar Co., Detroit, Mich.; Holland-St. Louis Sugar Co., Holland, Mich.; Western Sugar Refining Co., Marine City,

IF — what a great, big, little word, so full of contradictions, possibilities, and impossibilities! There are two kinds of “ifs”—one that leads on to success, and the other that courts failure. But the one that I have in mind is a veritable will-o'-the-wisp—so fine, so beautiful, so promising, so full of a glorious future that knows no failure. There are a lot of good “ifs” and bad “ifs” in beekeeping, but none of them more alluring and I may say illusive, than migrating from the South to the North. It is an ever recurring daydream of some professional beekeepers, especially those who have bumped up against the honey failures and winter losses of the cold, cold North.

Let's, for the fun of the thing, consider some of the possibilities of the migratory “ifs” from the North to the South—possibilities, mind you, because some of them do not materialize. Bees working the year round; the elimination of dead capital that lies idle six months in the cellar or winter packing-cases; three and four honey crops a year; winter and spring losses eliminated; no spring dwindling; no expense for winter cases and cellars; never a cent for sugar for bees; winter stores of honey all safe; no chilled brood; always summer; birds singing; the air ever laden with the perfume of blossoms; always living in the glorious outdoors for the beekeeper as well as the bees; fishing and boating galore; health every hour and blood tingling at every pore; last,

OHIO TO FLORIDA AND BACK

Possibilities and Impossibilities of Migratory Beekeeping. One Big Beekeeper's Experience

By E. R. Root

barrels of money; but every one of them has secured barrels of fun, barrels of health, and barrels of experience. There is something besides money or honey that helps to make up this world's goods.

The A. I. Root Company has tried out migratory beekeeping from Ohio to Florida, and the first year we had success. Bees se-

is, perhaps, not too much to say that there are some beekeepers in the country who have been partially successful. None of them, so far as I know, have made



Fig. 1.—Another view of apiary shown in Fig. 2.

cured a good crop of honey in the Southland, and those very same bees and their increase secured a good crop of honey in and about Medina. If every year had been as successful as the first, we should have come pretty near making barrels of money. The next year we just about broke even, hardly that. The next year we were on the wrong side of the ledger, and the next year worse yet. Taking the whole four years of moving bees back and forth from Ohio to Florida, about all we got was barrels of experience, of the kind that Josh Billings tells about, where he said, “Experience is a good skule, but the tuishun comes pritty hi.”

In order to make migratory beekeeping a success, one must do the bigger part of the work himself. A hired man can not have the interest that one has in his own business, and he is, therefore, not watching for leaks as is the one who owns the bees and has everything to lose and everything to gain.

There are several men who have partially succeeded, if not entirely so, in moving bees from the North to the Southland, and then back again. They have actually overcome the problem of winter losses and spring dwindling, converted the winter food into bees in the Southland, caught a crop of honey, and then, when the season was over in the South, moved the bees in car lots to the North, caught another crop of honey—in short, succeeded in making it a business venture worth while. But it ought to be made very clear that the average beeman, I don't care whether he is a professional or

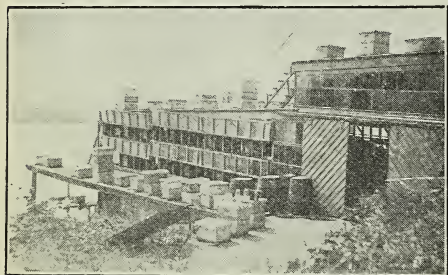


Fig. 2.—The Summerfield bees on the Bay at Toledo, Ohio.

but by no means least, barrels and barrels of—what shall I say? Health. Sure. Honey? Perhaps. Get rich quick? Yes, perhaps. “Ah!” you say, “you have gone clear daffy, soared up into the seventh heaven.” I guess so. Say, dear reader, speaking seriously, I should like to dwell in the seventh heaven, even if it be only in a daydream, once in a while.

I will admit that I have for the time being painted a picture of migratory beekeeping that is, probably, a little too rosy. It

not, will not make a great deal of money at long-range migratory beekeeping; but he will get health and strength, also a good increase in bees—and sometimes a good increase means a great deal when a crop of honey is in sight in the North. Short-range migratory beekeeping generally pays well.

Summerfield's Migratory Experience.

One of the most extensive beekeepers from Ohio to Florida and back is F. W. Summerfield, 2465 Broadway, Toledo, O. In the spring of 1914, in one of my Florida trips, I happened to meet him about 20 miles north of Apalachicola on the Apalachicola River. At that time he was getting ready to harvest his crop of tupelo honey. He had come from Ohio in a forty-foot gasoline cruiser, which he had been using around Toledo. This was put upon a large flat car, along with another car of bees. He and his family lived in the cruiser, going overland by freight to Bainbridge, Ga., where they took to the water, traveling the rest of the distance on the river until they reached a point about 30 miles north of Apalachicola.

Mr. Summerfield is a retired business man. His health began to fail him; and so he decided to move his family and his bees south, spend the winter and come north with the increase of bees and a crop of honey.

His different years of experience ran about as follows: In 1913, from the 190 colonies that he took to Florida he took 22 barrels of honey, left the bees in care of his man, increased the 190 to 300 colonies, which the next year gave him 68 barrels of honey. So far, so good. Figuring 300 pounds to the barrel, he took in all 27,000 pounds of honey, and made an increase of 110 colonies—not bad for practically within the confines of one year. But in moving the bees back to Ohio he did not get any honey. Otherwise his venture was successful.

The next year, 1915, he moved his bees

South, secured only 15 barrels of honey—not enough to pay freight on the bees down; moved them back to Ohio and got no crop.

Next year he went back, secured 30 barrels of honey, increased to 450 colonies, and left 150 in Florida. When he went back in 1916 he found the 150 in a starving condition; but he built them up to 340, produced 90 barrels of honey, 600 young queens, and 600 three-pound packages of bees, which he sold in the North. The rest of the 180 colonies he sent to Ohio, got an increase of a hundred, and also a fair crop.

Conditions Under Which Migration Pays.

While, perhaps, Mr. Summerfield has not made a great deal of money, he has not lost any—that's sure. He enjoys the work, has excellent health, and a lot of fun. One has to take into consideration that there are large expenses in moving bees from Ohio to Florida and back. Those expenses can hardly be much less than about \$2.00 per colony each way when you figure freight, loss of bees and brood (as some bees die en route), railroad fare of man going with the bees, cartage or drayage, and carpenter work and lumber to fasten the hives in the car properly. Ordinarily one car can accommodate from 300 to 350 colonies; the larger the number, the less freight charge per colony. These expenses simply mean that to make this migratory beekeeping pay, one must secure enough honey to pay for actual time spent on the bees covering an entire year.

In California migratory beekeeping for short distances has proved to be profitable. Even for longer distances, where bees have been moved from Idaho to California and back, some have made good. One man took \$50,000.00 worth of honey within the year. But where there are cases like this there are dozens where much smaller returns have been secured—yes, cases of severe losses. I shall tell of these later.



Fig. 3.—The Summerfield bees after they are moved to Florida.

MANITOBA MANAGEMENT

*Our Location Because of Difference
in Weather Conditions and Crops
Demands Modification of Methods*

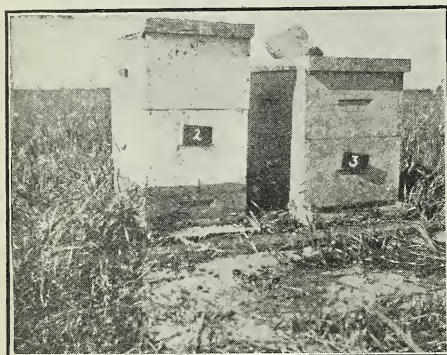
By H. W. Sanders

A RECENT inquirer in one of the bee journals asked how far north bees could be kept, and the answer was given, that as far north as men live bees are kept. Just how far this is literally true, I cannot say; but I hardly think that anywhere else do they have a climate quite as severe as that of Manitoba, and the fact that beekeeping is getting to be quite a considerable industry here speaks

and has a gap in the middle. Our bees often do not get carried out of the cellar until mid-April, sometimes not till May; and we, therefore, have less time to

build up in the spring before the clover begins to bloom. We have a great abundance of natural pollen from poplar and willows, and a little nectar from the latter and from wild-fruit bloom. Cultivated fruit has not been successfully acclimated except in one or two favored localities. We have an abundance of dandelion in May, and soon after the bees are out of the cellar they begin to build up with great rapidity and in favorable seasons sometimes swarm early in June. Clover opens about the third week in June, but so far it has proved a most uncertain crop. With an abundance of bloom the bees often get nothing and are inclined to rob. Brood-laying is curtailed, and unless feeding is resorted to they will not build up as they should for the later and more important flows.

Our real honey season comes in July, and from about the 10th of this month until the frosts come in late August or early September, there is practically an unbroken flow from wild mint, wolfberry, Canada and other thistles, goldenrod, and aster. The honey from the mints when first taken has



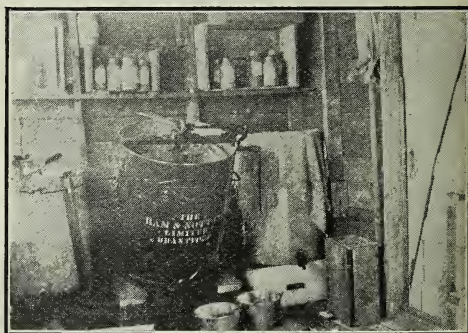
Ten-frame Langstroth (3) beside an eight-frame Jumbo hive (2). The Jumbo was made by fixing a shallow super to a standard eight-frame body.

well both for the wonderful adaptability of the honeybee and for the perfection of modern beekeeping methods and appliances. The provincial Government of Manitoba has announced that the 1919 honey crop will exceed one million pounds, and the lively demand for swarms and colonies at high prices is an indication of how far and how fast is travelling that interest in bees that is only gratified by the purchase of stock.

Ordinary Methods Need Modification.

Most of our bee literature has been obtained from the writers in the Northern States who have made such wonderful advances in the art of honey production, and have so unselfishly given them to the world; and while some few of our beekeepers learned their methods in older beekeeping countries such as Ontario, or England, a good many have started right out with modern ideas and modern equipment. We have found, however, that our shorter season has necessitated quite a little modification of the methods perfected by Doolittle, Dr. Miller, A. I. Root, and other authorities; and the account of the methods given by Bro. Ambrose of the monastery at St. Norbert, in a recent number of Gleanings, really needs an explanation to harmonize it with the proved and successful practices of the great beemen mentioned.

Your season begins sooner, lasts longer,



The extractor is screwed to a heavy platform, the top of which is hinged so that after each extracting it can be tilted forward, as shown, to drain it.

the characteristic smell and flavor of mint, but soon loses this on being kept.

Alexander's Methods Applicable Here.

The conditions outlined above, in practical honey production, make the methods of the late E. W. Alexander of especial interest to beekeepers in this locality, for his famous buckwheat honey flows came at about the same time of year as our heavy flows, and his system apparently relies on this buckwheat honey as the "bread and butter" of his business. Mr. Mendleson of California is reported as having said that in any loca-

tion the essential thing needed to secure a crop was to have the colonies ready when the crop opened, not when it closed, and tho this sounds obvious there is much wisdom in it. Let us apply it to Alexander's methods and to our conditions.

Whereas for a clover honey flow the main essential is to hold the colony together for the short time till the clover begins to yield, with a late flow there is plenty of time for the two halves of the original colony to grow to full strength in readiness for the best results in the supers. Therefore, the "Alexander plan" of increase will give maximum yields, where for a clover flow the two halves would merely build up on the honey flow and come to strength just as it closed. Furthermore, in the case of a clover flow, followed by a gap or dearth, emerging brood may become consumers instead of producers; and a week or two of queenlessness (to control swarming) may actually add to the ultimate honey crop, where in a locality with a late flow we need every egg that can be laid, for the early brood will constitute the gatherers of our crop.

We plan, therefore, to start the bees breeding as early as possible, to make early increase on the Alexander plan, and if necessary to feed to stimulate continuous brood-raising. By this means the "increase" themselves make a substantial contribution to the crop before the season closes.

Our Honey Allowed to Granulate.

Our honey, except on the rare occasions when we get a clover flow, is thick and rich, of amber color and pronounced flavor, and finds a very ready sale in our immediate neighborhood. We plan to allow it to granulate before sale if possible, partly to convince incredulous people that the granulation is not a sign of adulteration, and partly to stimulate the demand for granulated honey. It is well known that all the large botlers are obliged to heat their honey to satis-

fy the demands of the retailers for liquid honey, and consequently those who acquire a taste for granulated honey are obliged to rely on the local producer and return again and again. An exception to the above is, of course, furnished by Root's "Honeyspred," which is excellent, but which suffers from the fact that people are slow to find out that it really is nothing more than pure granulated honey.

Hives Used in Manitoba.

Hive sizes are of course a well-worn topic, and much depends upon the purpose for which the hive is used. For extracted honey, the ten-frame Langstroth is perhaps the most popular; but some use the Jumbo or the Dadant, while one very successful winterer of bees in the country uses the old Jones hive—a square hive of large capacity—which he brought up from Ontario some years ago. The photo shows a 10-frame Langstroth beside an 8-frame Jumbo. The latter was made by fixing a shallow super to a standard 8-frame body and then using Jumbo frames. The 8-frame hive always gave us such good results in wintering that we thought this experiment might show the same results, and by uniting the depth of a Jumbo frame with the compactness of the 8-frame hive, enough honey might be always present to act as a "balance wheel" to ensure steady breeding in spring.

Device for Draining Extractor.

The picture of the interior of the honey-house shows one feature that might be of general interest. The extractor is screwed to a heavy platform the top of which is hinged so that after each extracting it can be tilted forward, as shown, to drain it. Without this arrangement there used to be some honey that would granulate in the extractor after each extracting, and have to be cleared out at the end of the season.

Sturgeon Creek, Man.



OUTSIDE of a few small localities in the United States, honey in carload lots from ordinary garden plants would seem almost like a myth; and I confess when I heard about the large quantities of celery and parsnip honey that were secured in the Sacramento Valley I myself thought there must be some mistake, and that the bees were getting honey from some-thing else.

Truck Gardens Along the Sacramento.

Just before leaving California, toward the latter part of June, I had the pleasure of taking a trip with H. Gear of Walnut Grove,

ALONG the SACRAMENTO RIVER

*Honey from Parsnips and Celery by
the Carload in California. How
Foul Brood Has Been Eliminated*

By E. R. Root

Cal., who has some 500 colonies scattered in lots of 150 in a place. Together we traveled thru a portion of the Sacramento River Valley, or that part of it

that runs from San Francisco to Sacramento. For miles and miles up and down the river we saw some of the finest garden country in the world. This old river, like many other streams running thru soft soil, has a fashion of overflowing its banks and making new channels; so we see on each side high embankments, the purpose of which is to protect the truck farming during high water in the spring. There are all kinds

of garden truck grown there, and many of the plants are raised for seed—especially celery and parsnip; and right here is where my story really begins. Celery and parsnip honey is stored in skyscraper hives. Here is a photo showing one of the skyscrapers in Mr. Gear's yard near Walnut Grove, and Mr. Gear standing alongside. His apiaries are located along the river in peach and prune groves. While the bees get a great deal of benefit from the early fruit bloom, it is equally true that the fruit-growers themselves are benefited ten times as much in more and better fruit. But it is not this fruit bloom that yields the main crop. As is usually the case, the fruit bloom gives the bees a good boost for the heavier flows that come later—in this case from the garden plants when they are allowed to go to seed.

Honey-producing Plants of the Garden-truck Lands.

At the time of my visit at Mr. Gear's I saw many of the hives stacked five or six high and on opening them we found them completely jammed full of honey; in fact the bees should have had room long before but Mr. Gear had had difficulty in getting help, and the bees had got ahead of him. The colonies were so crowded that the space between the cover and the tops of the

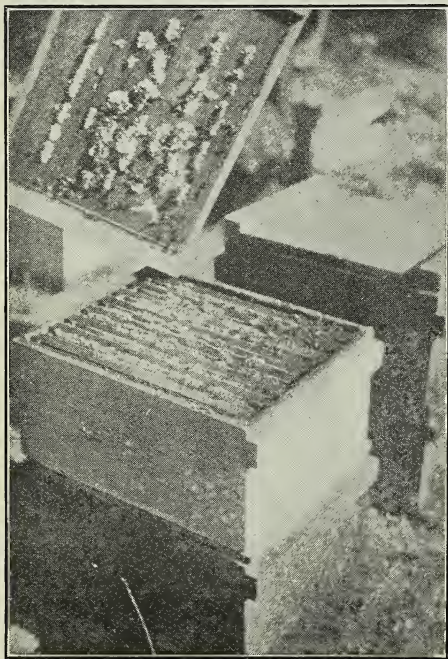


Fig. 2.—The top of one of Mr. Gear's hives, showing that the bees are jamming in the celery and parsnip honey or they would not have built so many burr-combs. Owing to the difficulty of getting help Mr. Gear acknowledged that the bees had got ahead of him, and that he must immediately put on more supers.

frames were built full of burr-combs as shown in Fig. 2. All this honey was from celery and parsnip—at least that is what Mr. Gear told me. While I did not tell him so, I wanted the proof. We went down the river



Fig. 1.—A view looking down the Sacramento River. The picture was taken from the top of one of the levees that are made to prevent the river from overflowing its banks in the spring and ruining the truck gardens. During the summer season the gardens are irrigated with water from the river. In some cases it flows by gravity on the land, and in other cases it is pumped where the land is above the level of the water in the river.

a little way to see some of the big celery and parsnip fields that were in bloom and going to seed. On our arrival at the field it was very easy to be seen that there was honey in the blossoms. In the sunlight the little drops of nectar gleamed like myriads of little diamonds—no question about it. The nectar was there in great abundance, both on the celery and parsnip blossoms, and the bees, fully conscious of the fact, were right there on the job. I tasted some of the raw nectar from the celery. Sure enough, there was quite a strong suggestion of celery flavor.

There are other plants in that garden-truck land that yield honey likewise; but the celery and parsnip were the most important. There is not a large amount of alfalfa, and what there was seemed to be scattered along the levees.

Bee Ranges Protected.

There are but comparatively few beekeepers in that garden-truck country, and the few in that territory are pretty evenly divided. There is not a chance for another man to get in edgewise; and most of the California beekeepers today are wise enough not to encroach on the territory of another. Mr. Gear has plenty of neighbors, but they are all at respectable distances, and each enjoys his own field.

The Quality of Garden-truck Honey.

Garden-truck honey is not of the best—it is a mixture, a little of everything, but

mostly celery and parsnip. The last named does not furnish as good honey as the celery.

Troublesome Stages of European and American Foul Brood.

Mr. Gear has had his share of foul-brood troubles; and he is one of the few men in California who know both European and American. He had both diseases practically under control when I was there.

At another time I hope to show photos of European foul brood from one of his apiaries in an advanced stage which he was holding for experimental purposes, and also a sample of American from the same yard. I was confused as to which was which. There were the characteristic scales which were alike in both samples. There were the typical perforations, both alike. They were alike in so many other respects that it is not to be wondered at that many of the beekeepers of California have been confused. I showed photos of these at a number of field meets, and asked the beekeepers to tell me which was which, and in most cases they got them wrong; and I will tell you why at another time.

Rendering Foul-brood Combs.

Mr. Gear's experience with foul brood necessarily forced him into the wax-rendering business. Fig. 4 shows his handy outdoor wax-rendering outfit with which he has melted up thousands of combs and cleaned up all his apiaries. At the time of my visit he had cleaned up everything except the two hives before mentioned, and, of course, was having but very little use at that time for the rendering outfit.

I find that more and more beekeepers use these outdoor rendering outfits. During quite cool days when the bees do not fly much and the beeman cannot work with his bees the combs are melted up, letting all the unpleasant odors escape into the open air.

Disinfecting Hive-bodies.

Mr. Gear showed me a little trick of the trade in disinfecting—or, rather, burning out hive bodies. He makes a wholesale job of it. He takes an ordinary fruit can holding about a quart. He punches a hole near the bottom in one side with an eight-penny wire nail. He fills this can with kerosene and plugs the aforesaid hole for the time being. He now piles up four or five hives on a hive-bottom, or

as high as he can reach conveniently; then with the can of kerosene he allows a fine stream of the fluid, after removing the plug, to flow out against the insides of the stacked-up hives until the inside surfaces of the hives are pretty well covered with the kerosene. The little tin can is much more effective than one would imagine. By holding it near the top, and whirling it around, a fine stream of kerosene will be thrown all



Fig. 3.—Mr. Gear, Walnut Grove, and one of his stacked-up hives filled with parsnip and celery honey. At the time of the editor's visit, Mr. Gear had many such hives in his apiary, and all of them showed by the burr-combs that the bees were storing honey.

over the inside of the stacked-up hives. He now touches a match and allows the flame to burn for a few seconds, when he dashes in a little water and claps on the cover. The whole operation can be performed in much less time than it takes to tell it.

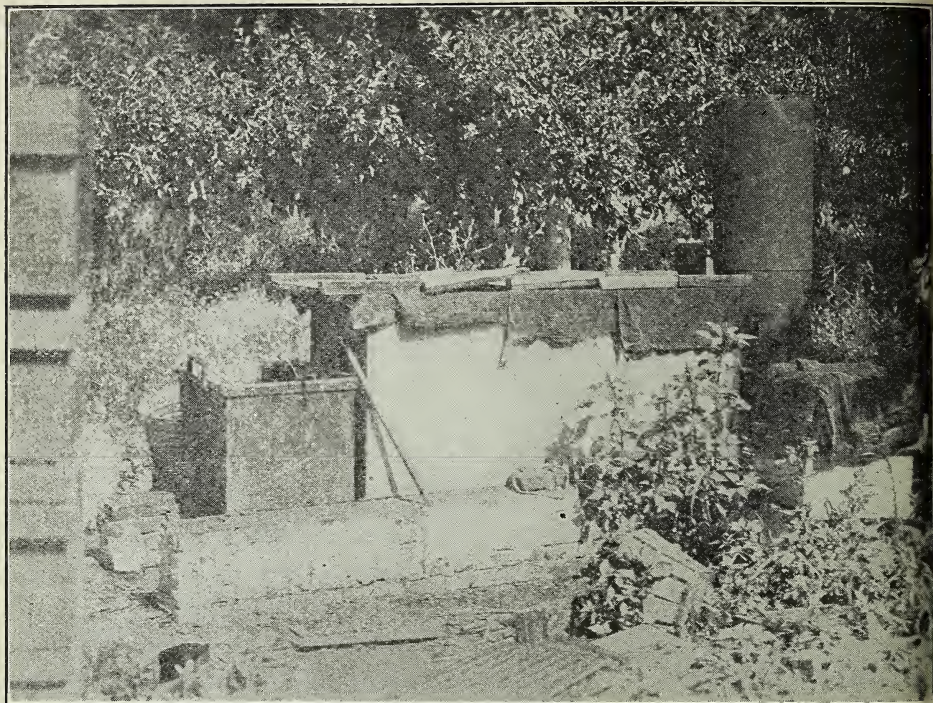


Fig. 4.—Mr. Gear's outdoor wax-rendering outfit with which he has melted up thousands of combs, and cleaned up all of his apiaries. There is nothing in the world that will scent up a house like rendering foul-broody combs inside. Mr. Gear has not only an eye to business, but he has considered the convenience and comfort of his best queen—the one who runs the house and cooks his meals.



More beekeepers registered at the Madison Beekeepers' Chautauqua than at any other short course yet held.



ANNE LESTER AND DADDY LOWE, BEEKEEPERS



By Grace Allen—Chapter X

ACHEERFUL fire was blazing in the Lowe livingroom and in its glow sat the two old people and Jack and Anne. The day was chill and gray, with rain against the windows. Two small books lay on the table by Mr. Lowe. "Think of having both a Roman Emperor and a Roman slave with us, right here by our very fire-side," Anne had said. For in that quiet, rain-bordered, fire-lighted hour Daddy Lowe had been reading at random favorite marked passages from Marcus Aurelius and Epictetus; while Jack, lying on the couch by the window, had watched the light come and go across the girl's sensitive face as she listened.

"If, careless of by-gains, you keep your god within pure and erect," he had begun from those deathless diarylike pages written centuries ago in the privacy of the imperial tent of the old Roman Emperor, fighting his last battles there along the Danube where he held back the invading barbarians from the north; and again, "This is the way of salvation—with your whole heart to do what is just and say what is true; and one thing more, to find the joy of life in heaping good on good so close that not a chink is left between"; and still again, "Whatever anyone does or says, my duty is to be good; just as gold or emerald or purple forever say, Whatever anyone else does or says, my duty is to be emerald and keep my proper hue."

And from Epictetus, the slave, "I am free, I am a friend of God. Whithersoever I go, there shall I still find Sun, Moon, and Stars; there shall I find dreams, and omens, and converse with the Gods." And so on, to the ringing lines beginning, "What would you be found doing when overtaken by Death?"

As usual a deep full silence closed over the last words. It was Anne who spoke first, scarcely interrupting the stillness to do so. "Thank you, Daddy Lowe," she said gently, "and you," touching the Marcus Aurelius as she passed; "and you," touching the Epictetus. "Now I'm going out to walk in the rain—and let it soak in!"

In a few minutes she reappeared, rubbered and raincoated and ready. Outside the door she found Jack waiting, in boots and mackintosh. She shook her head at him. "Ought you?" she asked, with the solicitude they all tried to avoid, he hated it so.

"Of course I ought. You might get drowned or blown away."

"Mrs. Lowe!" she called. "Jack's mutinous."

"Too late," he retorted cheerfully. "Dad's already convinced her. Anyhow, haven't I been walking every day for two weeks? And is the weather to stop me?"

"Apparently not," said Anne.

As they splashed down the steps, "Let's

go around by the bees first," Anne suggested. The water was dripping off the metal covers; "but they're dry and comfy inside," she assured the unworried Jack. "See how the hives all tilt towards the front. Any inside moisture can run out and no outside moisture can run in."

"If the outside moisture can't run in, how can there be any moisture inside to run out?" Jack challenged her.

"Well, you see the bees are in there eating honey, for one thing—and honey's got water in it. It's a carbohydrate, and you know better than I what that is—cause you've known longer. Want to hear—just as if you didn't know? Well, it's something made of carbon, hydrogen, and oxygen. And after it's eaten, it ends up as carbon dioxide and water."

"Wise young woman," murmured Jack.

"So there's bound to be moisture in the hive. Sometimes there's so much, it condenses and drops down on the floor—and even runs out the entrance. And the combs, especially the outside ones, get all moldy. I remember last winter Daddy Lowe and I poked little twigs in a lot of entrances and some of them came out all wet. But they were hives that had sealed covers. Daddy Lowe doesn't have any trouble with damp hives, because he uses absorbent cushions."

"Uses what?"

"Overhead packing, with just burlap between it and the bees. The water vapor evidently rises, and passes thru the burlap into the packing. Anyhow it disappears. Some beekeepers think overhead packing and upward ventilation are scandalous; but your father's had such good success with it, of course he keeps right on using it. So naturally I'm a devotee of that system, too."

"Honestly," Jack exclaimed boyishly, "isn't Dad great?"

"Honestly," Anne smiled back, "he is."

"But what I don't understand," she said as they started for the road, "is why you, the son of your father, don't know all there is to know about bees."

"Perhaps I do, and am modest about it."

"You didn't seem to know much just now."

"Well, for a fact, I never had anything to do with the bees in the fall—always going to school, you see—grades, county high, college. But I helped Dad a lot in the summer. Don't I know—let's see, what do I know? Order, Hymenoptera—genus, Apis—species, mellifica. How's that?"

"Whew!" exclaimed Anne. "But I meant practical things."

Jack meditated. "See that your colonies are strong, eternally. Keep Italians. Then you surely won't have moths, probably won't have disease, and almost certainly will have honey. Use full sheets of founda-

tion, wire 'em in, and you'll get good work-er comb. Don't allow any drones at all. Then you'll have too many anyhow. Never let the hives get crowded. Always keep ahead of your bees. Give 'em what they want before they want it. Doesn't that sound like Dad?"

Anne nodded merrily. "Do go on! It sounds like a beekeeper's book of proverbs."

"There's lots more—Dad drilled it in pretty well. Never leave honey exposed or you'll start robbing. Work quietly. Don't use too much smoke. But use enough. Don't let your bees swarm. At least, not often! Now don't ask me how to prevent it, Miss Anne. You can't put swarm prevention into a proverb. You know that. Still, how's this? Plenty of room for both brood and honey, a little shade, and a lot of ventilation. That'll all help. And young queens aren't so apt to swarm as old ones. But, goodness, some of them will swarm regardless. I've hived a lot of them in my life. Clip your queens and they can't go away. Like my summary proverbs?"

"They're dandies."

"Then you give me some wintery ones."

"Young queens again, then. Plenty of young bees, emphasis on the young. Plenty of sealed stores, not less than thirty pounds. Windbreaks. The rest of it has scarcely passed into a proverb yet. Plenty of packing, if you pack, and small entrances. If you cellar, a dry, well-ventilated cellar, averaging about 45 degrees. And Jack, your father says, above all, winter or summer, you must love the work."

On down the rainy road they went, straight into the heart of November. And all around them was life and inspiration and beauty, where so many older, wearier folk, huddled about small fires, saw only fog and drizzle and chill. It is the way of youth, this seeing beauty at the heart of all things. And some there be, happily, who stay always young.

For a long time they walked in silence, with only the occasional comments that grew out of the walk itself; "Some tree," from Jack, as they passed the bare oak at the corner; "How heavy and drenched the leaves lie under," from Anne, or "Listen!" when a birdnote floated across the gray; and other such little obvious things, that just said themselves and wisely rested there.

"There's one nice thing about you," Jack remarked once.

"Thanks," said Anne. "My raincoat?"

"Also," said Jack, "you don't think you have to talk every minute."

"I like conversation," she answered. "But I do like to keep still, too, and just listen. Something comes closer when you're still. God, maybe."

"There's one nice thing about you, too," she added, a few minutes later. "You don't have to be talked to every minute. It does make a difference," she explained. "Some men sort of rattle, if you don't talk."

Jack shook his head in mock distress.

"Empty wagons on a rough road," he mourned. "And some girls, by the way, rattle when they do talk," he added.

They turned by the old sycamore, and followed the creek road for some time. "If I weren't here," there was the slightest tinge of self-scorn in Jack's voice as they paused where stepping-stones led across, "you'd go on over and climb the old hill."

"Perhaps," she admitted. "But it's a prouder thing to stand here and remember just why you can't climb hills right now."

The honest ring in her voice shamed the dissatisfaction out of his. "Please understand I don't mind what I got," he urged anxiously.

"Of course I understand. You're in a hurry to go back. But Jack, you know even strong young hearts like yours don't get over such a bad case of gas in a month or two."

Midway her words Jack turned to her swiftly. How lovely she was, vivid and windblown and earnest. "And there are some things they never get over, Miss Anne," he said, his voice suddenly low and tense, "and never want to."

"Does he mean Katherine?" Anne thought. For sometimes even women force themselves to think with their heads only, instead of with their hearts—the natural way. "Anyhow," she decided quickly, heart and head both fluttered a bit by the strange new tone and the strange new look, so directly into her eyes, "anyhow, this is no time to keep still. But—I can't think of a thing to talk about. I'll have to try the weather."

So presently the girlish voice said, "It seems queer to me that some people don't like rain. I love it."

No reply.

"I believe I'd want it to rain even in the Forest of Arden."

Still no reply.

"I don't mean just to make things grow," she kept on, sure she was talking against something inevitable, "but just for the rain's sake."

And still no reply.

Whereupon Anne sighed, a solemnly twinkly sort of sigh. "Evidently the rain won't do," she remarked impersonally to the scenery, "I'll have to fall back on bees, or the war, or books."

Then Jack turned to her again. "Anne!"

One word—and it was as tho she had never heard her name before.

"Anne, I don't know a thing about rain! Or bees or books or anything but you. There isn't anything or anybody in the whole wide world—but Anne!"

And the look in his face was such as no one had ever seen there before, so flaming it was, so swept with emotion, so tender and holy and reverent.

"I wish to God there wasn't any war!" The words broke from the inmost depths of the brave and boyish soul of him. "But when it's over—dear—do you think—? —Anne!"—Concluded in December issue.



REFLECTIONS OF A BACKLOTTER

Do You Know Little and Talk Much? If So You Can Be President

The remarks that I made at the last meeting were not at all intended as disrespectful towards the big lights in the bee business, but it seems that since I made them I have become a more important personage in the fraternity. I have been elected president of the local chapter—and this causes me to comment on the art of being noisy.

Early in life my father impressed on me the importance of finding out a reason for everything that happened. That was the thing that got me into all this trouble with the presidency, yet I cannot break the habit.

I wonder why I was made president. I'm not much of a beekeeper, as I have before mentioned, but yesterday I bought 13 colonies from a fellow who is moving to Wyoming, making it 32 to date. Then I've ordered 50 two-pound packages from the South to be delivered in May, and that will put me in with the fellows who have taken the third degree. If I'm to be president I must first, or later, be a beekeeper.

But I'm worried about the presidency. Or rather I was. I've been looking into the matter a bit, and I may as well let you have the results of my investigation. Maybe some of you fellows will want to be president or something in a beekeepers' association some time and I may as well tell you how, for I don't expect to keep it always.

I've written a lot of letters about this and have data about a lot of different organizations. I'm intending to be mighty careful not to mention any names, and I guess I can get away with that, and not tell where any of these associations are. But if you guess them that is no fault of mine. This business of being elected to office in a bee club is about as interesting as the bee business, and, as we all know, that is the most interesting thing there is.

I always supposed that the president of a bee outfit must have about 10,000 colonies or must in some way have distinguished himself as an expert in beekeeping. I have changed my mind. He must have distinguished himself, all right, but not always in something that has anything at all to do with beekeeping. I'll tell you about a few, and then you'll see that it is not so hard, after all, to get such a position. It's all in knowing how.


The first case that came to my attention was that of the secretary of the ——— Association. He is a dandy example of what I mean. He went to the meeting of the association about five years ago. Now he actually has five colonies, so those who

say that he knows nothing about the bee business are liars. But he is the champion talker of the State, and every time anybody got up to say anything on any phase of beekeeping, this fellow was on his feet right away to comment. He has the happy faculty of making every fellow think that the views he has expressed are just the last word on the subject. So he made friends and they made him secretary. I forgot to say that he has a cousin who is in the printing business, and he gets the association business, but that isn't graft unless you actually get the business yourself. Anybody who would think of competing for that job would be a fool unless he can talk more than the present incumbent. You know what the farmer said about the camel.

The next case that I ran into in my hunt was the president of the ——— Association. He was a state officer of some sort—just what I have not been able to find out; but it had something to do with bugs, so when the beekeepers decided to have an organization he went. Being a sort of political highbinder and hoping some day to get a political job in the agricultural department of the State, he talked a lot. It was all about the beauties of nature and that sort of rot. Then when they really got down to business in organizing he told them about the advantages of everybody pulling together and how fine it was for brethren to dwell together in Christian brotherhood. Of course, that didn't have anything to do with a bee association, and he didn't know just what a bee association was supposed to have for its main job; but they made him president, and he has held it for 15 years. Yes, he did just what I am doing, only not so much so. He did buy a few colonies and read a few articles on beekeeping. Really for a time he became quite an authority and wrote a lot for the bee journals, but that is dangerous—or at least more dangerous than making a noise at a bee meeting. He soon stepped on something by giving a lot of advice that everybody knew was bunk, and so the editors were not so anxious to hear from him as they were at first. The moral of this is: make all the noise you want at a bee meeting but be more careful what they get on you in black and white. The last time I told you about my bee investigations I said that anything goes in the journals. I'm taking that back now, with apologies, for I've found out that some things go at a bee meeting that the journals won't take. I therefore apologize to the journals. I guess you'll think I change my mind a lot about some of these things, but you must remember that I've been a beekeeper only a little while; in fact I've not yet served a full term as president.



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One of the most interesting cases that I dug up was that of the presidency of the Association. They had slipped up by putting a real beeman in for a year, and he worked up a whale of a meeting with all sorts of papers by beekeepers on beekeeping subjects. Something had to be done about that, for a lot of folks who wanted to talk didn't have a chance. Now the president was a good fellow, and they didn't want to hurt his feelings, but everybody felt that to break all the precedents of association work in that manner was a thing not to be tolerated again. Right at what you call the psychological moment in came the man who saved the day. It's funny how this psychological-moment stuff works. I guess it's something to do with the fact that angels watch the feeble-minded.

The fellow who turned the trick here is one of the leading stove manufacturers of the State. He's also quite a Baptist, a member of the state legislature, one of the big bugs in things generally. He had two colonies of bees on his big farm just outside the city, into which he sinks some of the stove money, and he had heard that there was to be a bee meet. I forgot to say that he is also a leading joiner in secret societies. Just as soon as he got fairly seated, the matter of buying supplies cheaper came up. Now that is no sort of a subject to take up at a meeting of beekeepers, for that means that somebody ought to talk about it who knows something about business; but the beekeeper who had slipped in as president didn't understand. This was a great opening for the stove man, and he was on his feet in a minute. Something ought to be done about this; the man who took care of his bees had complained that supplies cost too much. He told them all about the way business is conducted, how everybody ought to pull together and co-operate, and about the great success he had made of the stove business by being on the job. It took about an hour to tell this, but that was a short speech for one in training. The result obviously was that they made him president. At first some of the beemen thought he ought to be secretary, but that means too much work in sending out the notices of the annual meeting, so they decided not to give him the lower job but go the limit.

No, of course he didn't do anything about the association business during the year, but you can bet that all the papers of the State carried the joyful news about his election. When the next meeting came around he was in the middle of the campaign for state senator, so he sent the vice president to do the job, also one of his lieutenants to tell the beekeepers that they ought to stand behind the president in the election, and, amid applause, how much he had done for beekeeping in the State. I can't understand just why he was not re-elected, except that

there was a fellow there on the ground from the northern part of the State who is interested in selling real estate. He comes from a great bee country and he did sell a lot of land to the beekeepers. They made him president—not that he was in the same class as the senator, but he was on the ground and the senator was busy.

The best case that I'm going to tell you about I've saved for the last. I could go right on in this line for some time, but by this time you fellows ought to have a pretty good idea how to get an office. However, your education will not be complete until you hear about this one. It has to do with the biggest association in the country. It had been going along all right and had stuck pretty close to the bee business for several years, and some of the fellows thought that there ought to be a change. The secretary was a commercial beekeeper who had given a lot of his time to the association and had helped out a lot of the beekeepers who had been in trouble from various causes. Just in the nick of time the man who saved the day appeared. He had 15 colonies of bees, 14 (to be charitable) rotten with foul brood. He has a country store in a little town in the hills, and is the champion organizer of the world when it comes to getting up ideas that will not work.

He blew into the meeting at the moment of greatest dissatisfaction and when opportunity offered (which was mighty soon) he arose to comment on the downtroddenness of the beekeeper, the robbery of the honey-buyer, the rascality of the supply dealer, the ulterior motives of everybody that was not one of the big producers. The remedy was co-operation. I've often wondered about that word co-operation, and, even if I did get to be president of our club, I haven't found the magic of that word yet. You can get it off anywhere and get away with it. You really don't have to have a real use for it or to have a plan of co-operation that will work. All you have to do is to use the magic word and you have turned the trick.

Co-operation in this case meant, as nearly as anyone could find out, that the beekeepers were to organize with paid officers and by that means they were to put the honey-buyers, the supply dealers, and all other parasites of the bee business out of commission. It would take \$25,000 a year to get the right sort of man to do all that ought to be done, and the beekeepers were at once to take steps to perfect the organization. At once the regular program was dropped, and the meeting took up the matter of co-operation. Thomas Jeff—but I'll not give his name, quietly told some of the beekeepers that he was willing to make the big sacrifice and that if they would make him the general manager of the outfit he would be willing to take it for \$10,000 a year. Of course, they didn't have any money at all

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now and he would wait until they did get some before taking any salary. You know the result before I tell it to you. They made him secretary. Here was a man who did not want the presidency, for it was understood that the president was not to get a salary when the money for this scheme came rolling in. And so this obliging man was soon drawing a salary of \$10,000 a year?

No, you're quite mistaken, and it shows that you fellows still have a lot to learn about officers of associations. There wasn't anything at all done about it. After all that I've told you about associations you ought to know that it was all wind. He was re-elected the next year too, on more promises, but by the end of two years there was a bigger blower on deck and he went out.

Now I've told you the secret of success as an officer. If any of you would like to get such a position all you have to do is to follow what I have told you. As for me, I expect to get into the beekeeping game on a commercial scale, and that will disqualify me for office any longer than the present year. If I were eligible any longer I think that I would keep all this to myself, but you fellows can go to it now and I'll do all I can to help. I'm very much interested in associations, for it's a great game and I like to attend so that I can meet the big beemen of the State; but, of course, as long as the rules for election of officers are unchanged we don't get any good from the meetings themselves, so far as beekeeping is concerned.

Since you ask it, I suppose it ought to be possible to make the organizations worth while for real beekeepers, and when you think that there is any hope of a change I'll be glad to help you. But if you do change you'll spoil a fine and very human game. As I have told you success as an officer depends on lung power. I'd hate to try to change the rules alone.

Maryland.

Phil Franklin.

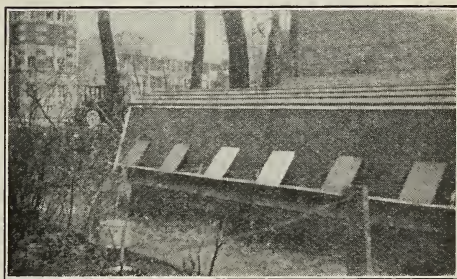


Apiary of S. J. Morrison, Chico, Calif. In the background is his screened 6 x 6-foot honey-house and in the foreground what he mentions as "some of Mel's friends with hides on stretchers." He says the skunks were caught in the act.

BETWEEN APARTMENT HOUSES

A Chicago Man Keeps His Colonies Where Population is Dense

A Chicago business man keeps a dozen colonies of bees between two big apartment buildings and just across the street from several more such buildings. He lives in one of the dwellings, and his bees are within 25 feet of his kitchen door and within 10 feet of the sidewalk, while there is no enclosing structure of any kind. This man is George Theodore Halla. He has been raising bees for three years, and says he has had no complaint from any source.



Mr. Halla's city honey-makers in their winter quarters.

The accompanying picture illustrates Mr. Halla's lay-out. The hives are covered in winter by an outer house. There are six hives on a bench, and the outside house is built to conform to the shape of the six hives. It is built in sections and screwed together in the fall and unscrewed in the spring. There is an opening in the outer house for each one of the hives inside, and over the opening is provided a slanting cover as shown. Mr. Halla believes that it is better to keep bees than to keep dogs and cats. The bees work on the vast area of flower beds in the residential district, on the bloom of thousands of acres of gardens, and on the clover-covered spoil banks of the Chicago drainage canal.

Chicago, Ill.

J. L. Graff.

BEES IN BROOKLYN

Results Such as any Average Beginner Could Reasonably Expect

The bee tinder in me, set on fire by reading Maeterlinck's "The Life of the Bee," during the winter of 1916-'7, has grown to be a conflagration. We have always made a specialty of "bees;" but up to May 1, 1917, it was "ba-bees." Since that time we have included "honeybees."

Early in the year I ordered a beginner's outfit which included a ten-frame colony of

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bees on Hoffman frames, and bought locally a colony of bees. My plan was to keep them from swarming if possible, and run them for comb honey during the clover season, and afterward to make increase.

I clipped the queens and handled the frames once a week to look for queen-cells. One colony started queen-cells early in May, in wet cold weather. Believing these to be supersedure cells I did not disturb them. When they were capped I removed one frame with two or three good cells and one frame of brood and honey into a new hive. The parent colony superseded their queen and stored about 25 pounds of surplus clover honey after drawing out the comb in nine shallow Hoffman frames. The two-frame nucleus, without any more help, raised what I believe to be the best queen in our yard, drew out the foundation in nine Hoffman brood-frames, and later went into winter quarters with more than enough stores.

My first colony was a story and a half high. About June 10, both brood-chamber and super being full of brood, I placed an excluder under the super and put the queen below. I left it in this position a week to make sure there were no eggs or brood under three days old in the super, then raised it, placing a super of 4x5 sections with full sheets of foundation between, at the same

time removing the excluder. The bees went to work in the sections very soon. When the brood had about half hatched out of the top super I shook a part of the bees out of it and removed it altogether, placing it on a bottom-board in a new location and introducing a queen which I received by mail. Thus nucleus built eight frames of comb and stored plenty for winter.

I also built up two other colonies by taking some brood from other hives and introducing a queen.

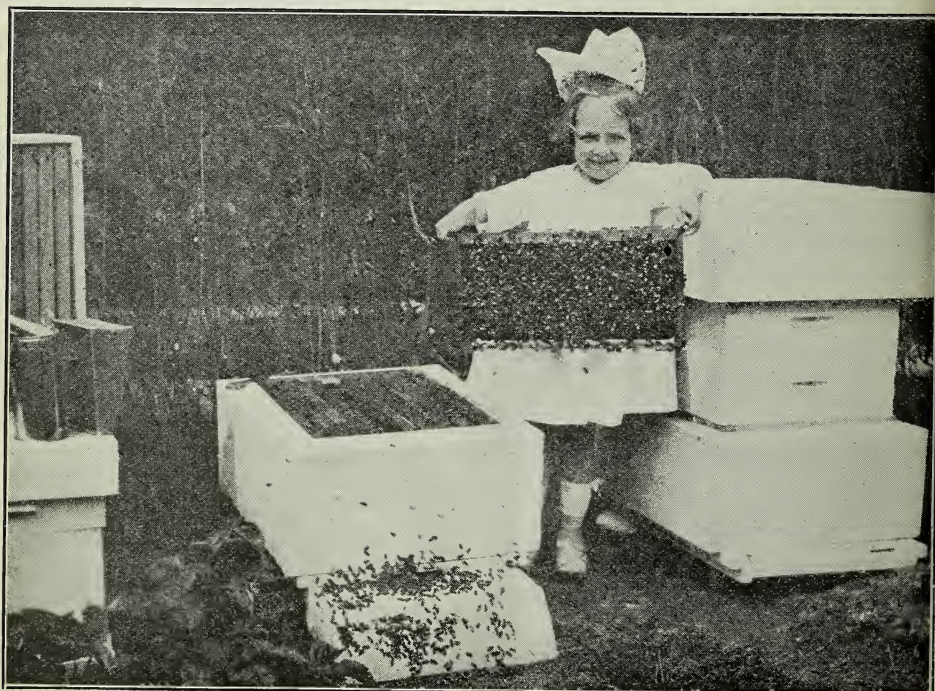
After taking our inventory and placing a value of \$12.00 per colony on my bees, together with the 90 pounds of honey, I found I broke about even. Our work and study among the bees increased the pleasure we always get out of our flower and vegetable garden two or three fold.

I was ready the next year with supplies nailed and painted, with a queen-rearing outfit of my own make, in order to experiment with this most interesting part of bee-keeping. I also made two observatory hives in order to carry on my studies.

I will eventually work into running some bees for extracted honey; but for the present I want comb honey for my neighbors and friends and for our own table.

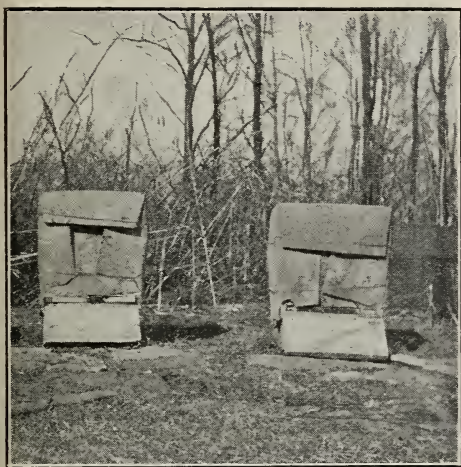
Brooklyn, N. Y.

J. O. Stewart.



One of Mr. Stewart's "ba-bees," helping Daddy.

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Some winter in single-walled hives wrapped in paper. In the North, this is insufficient protection.

BEEKEEPING IN THE BALKANS

Methods Primitive; Homemade Extractor; One-pound Sheets of Foundation

Beekeeping in the Balkans is put on the same plane with horticulture and dairying. Bees are kept mostly on a large scale. The equipment is most primitive as in all Eastern countries. A few of the more progressive men adopted the Carniolan hive, Dant hive, and the Long Idea hive. I met the most progressive and enthusiastic beekeeper at Monastir. His name is Otsevich. He keeps 50 colonies of bees. The hives resemble our trunks even to the hinged cover and handles on the ends. The frames are jumbo size with a vengeance. He invented the wiring of frames independently of us. In Athens somehow he got hold of an old German machine for making foundation. He uses full sheets of foundation, each sheet weighing about a pound with four diagonal and four horizontal wires. He extracts the honey with a homemade two-frame extractor and uncaps his combs with a wire brush. The by-products he uses for making honey vinegar and mead. His crop last summer averaged 150 pounds per colony of the best-flavored honey I ever tasted, made from nectar of mountain flowers, sage and thyme. The Olympus mountains being in full sight, this honey may be classed with Virgil's Hymettus honey, or with the famous nectar and ambrosia which are supposed to have constituted the chief food of the old Greek gods.

The Balkan bees resemble the Carniolans, except that they are slightly smaller and a brighter grey. They are exceedingly gentle, very quiet on the comb altho they follow you with their eyes. They seem to be

little given to robbing. The queens are as prolific as the Carniolans and are the same color. They have a great strength of wing to judge from the fact that the Macedonian plains during the summer drouth were burnt and parched and devoid of all bee pasture, the nearest source of nectar being the surrounding mountain tops where frequent rains cause the mountain soil to bring forth the most wonderful carpet of flowers. My rough estimate of the distance from the apiary to the pasture in the mountains is about seven miles.

The ten hives and other equipment, which were sent to the American Red Cross to start an American apiary in the Balkans, arrived in Solonika in good shape, except five bodies with contents which disappeared on the way. The five remaining bodies I assembled with the help of Serbian soldiers, had them painted with the paint sent with them, which, by the way, was the only paint in the Balkans and easily worth \$100. I obtained some straw hives with good colonies of bees in June, transferred them to the new hives on full sheets of foundation, and they immediately went to work drawing out the foundation. By September 1 they had the brood-chamber full of honey, and I was sorry I had no supers to give them. It was too late in the season to give them extracting-supers. The Serbian Government and ministers, as well as the war officials, were very much interested in our system of beekeeping. Crown Prince Alexander himself wished he had a colony of bees like ours, and I gratified his wish. One colony I gave to Mr. Otsevich in Monastir, one I gave to the head of the Serbian Department of Agriculture, and two were left at our camp.

The Serbian people are exceedingly quick to respond to every modern improvement they see in machinery and agriculture. They will discard everything impracticable without remorse as soon as they find anything better, and there is no doubt in my mind that after they have seen the advantages of our American system of beekeeping as compared with theirs they will be quick to adopt it.

Francis Jager.

University Farm, St. Paul, Minn.

BRITISH COLUMBIA NOTES

Fine Honey-production Possibilities for the Man who Adapts Himself to New Conditions

Beekeeping has a brief history in this Canadian province. There was but little farming prior to 1860, and then for a period of years it was not of an extensive nature, cattle-ranching being most important. The province has grown a great deal in the past 25 years, and in fruit-growing there has been a veritable boom. Small fruits are also extensively cultivated. In the British Co-

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lumbia environment apicultural practices, successful elsewhere, must be modified and often radically altered. The beginners in the newly settled districts especially suffer from the dearth of beekeeping traditions. However, the honey industry gains ground, and nowhere are there more enthusiastic and progressive beekeepers than those in this province.

British Columbia is an immense territory, an empire which extends to the arctic circle on the north, and in the south has regions where there is practically no snow in winter. Much of the interior is semiarid to arid. On the Lower Mainland, which is the center of population, and north to Prince Rupert the average rainfall is above 55 inches per annum, and some localities get as much as 90 inches. That is some rainfall. It is an illustration of the variety in conditions under which beekeepers in this province operate. They believe the general welfare of the industry can be improved by organization.

Beekeepers have been getting good prices—many averaging 20 cents a pound or more for their entire extracted output. In recent years honey-producers have received prices comparing most favorably with those obtained in other parts of America. One reason is the isolated situation of the province and the distance that imported supplies must come. Another is the slim local industry which has utilized only a small portion of the available forage. White clover, fireweed, and alfalfa are important sources of nectar. British Columbia beekeepers are sideliners, altho some of them have incomes from their bees which would recompense well for their entire time.

James Reagh at Ladner in the fertile Fraser delta has an apiary of about 30 colonies beneath fruit trees in his village back yard. He is probably the most successful beekeeper in the Fraser Valley; but not the least of the fun for him must be the local distinction. Scores have failed with bees in the Ladner district because of problems created by breaks in the spring succession of nectar-bearing flowers. Reagh produces almost all the honey surplus in his region.

Mr. Reagh learned how to handle bees in Ontario; but he says he had, in many respects, to learn all over again when he came to Ladner, as local conditions were so different. He began his apiary with wild bees captured in the timber several miles from Ladner, which is on a delta plain. That was away back in the 90's. For several years he had but little surplus; but he plugged away, learning the "how" of it. He now has always a nice income from his bees.

The Lower Mainland has an early spring and a late fall. Ladner is on a delta plain; and after willow bloom in early March there are practically no flowers until clover in June. Elsewhere fruit blossoms come along to furnish nectar, but thruout the district

April is ordinarily the crucial month of the year, and it is not safe for a beekeeper to count his losses until this period is passed. Spring management is, therefore, of much importance. At Ladner, Reagh found two dangers created by the hazard of the flower succession, and he meets them at the same time. One is the storing of honeydew, imperiling winter health when there comes a dearth of nectar and pollen-bearing flowers after the summer honey flow. The other is the great danger of a cessation in brood-rearing after willow bloom, and in that lengthy period before clover when forage is scant or non-existent.

On the Lower Mainland there is the inevitable difference of opinion as to the best way to bring colonies thru these weeks. Stimulative feeding is followed by some. Others are just as positive that nothing but ample honey stores will accomplish the object. Mr. Reagh's practice for years has been to introduce sufficient honey in the fall to carry the bees thru to the clover-honey flow. He introduces the honey just before honeydew, filling a compartment with solid comb placed beneath a brood-chamber, from which all but the frames actually containing brood have been taken. When the brood hatches out, the frames are taken away. This strategy compels the bees to cluster on the solid comb; and as there is no room for storage they gather no honeydew.

W. H. Collins, a veteran beekeeper at Grand Forks in southern British Columbia, finds cellar wintering best. He has a gravelly soil, neither very damp nor very dry, with a temperature around 38 or 40 degrees. The hives are kept about a foot from the ground, and 18 inches apart. The cellar is kept dark, and as quiet as possible.

L. Harris of Vernon, our genial provincial foul-brood inspector, is in the dry belt and winters outdoors. At Invermere in the Upper Columbia Valley, wintering in an outdoor trench has been successful in an experimental way.

As in the newer sections of the American West, most British Columbia beekeepers are "from" somewhere. L. Harris came from England; and his experience goes back to the primitive, much-pictured, old-style English hives. He brought bees with him on the trip out—a journey of over 6,000 miles. His apiary is in an irrigation district where orcharding is general. The bees are under one disadvantage common in the mountain regions of British Columbia—they must range largely in two directions. On two sides are dry sagebrush slopes for cattle-grazing, and the more productive bottom lands at this point are rather narrow. Mr. Harris bottles much of his honey for the local stores. He also has a small but well-equipped shop where he manufactures bee supplies.

J. T. Bartlett.

Ft. Collins, Colo.

ALL readers of Gleanings will be glad to know that E. R. Root has recovered from a serious trouble, after passing thru "the valley and shadow of death." Long may he live.



The annual meeting of the Vermont Beekeepers' Association was held on Sept. 24 at the large and convenient home of G. F. Hendee in the town of Pittsford. The attendance was good. The hospitality of Mr. Hendee was unbounded. The topics discussed were of much practical value. Mr. Selser of Philadelphia was present and added much to the interest of the occasion. The larger crops of honey during the last few years, and the higher prices obtained for it, have very decidedly increased the interest in beekeeping in this section. A goodly number of women were present.

The necessity for the use of brown sugar by many beekeepers raises a new problem. How can we make the bees take it? I prepared syrup enough for one yard, two pounds of brown sugar to one of water, the same as I have prepared syrup from white sugar. I supposed the bees would understand that white sugar was scarce and that they must use this new kind of syrup. But, "no, sir"; they refused, or took it so slowly that the ground would freeze long before I could finish feeding, and many colonies were starving. What should I do? There was no time to lose. Well, this is what I did. Having been able to secure some light sugar, I mixed this with the dark, and then added one pound of honey to each ten pounds of syrup. I put in also a little more water in order to make the syrup somewhat thinner, as bees will take a thin syrup better than a thick one. Then my troubles seemed to be over.

In that interesting account of field meetings by E. R. Root, pages 643 to 647, we are told that B. F. Kindig "showed that the beekeepers of Michigan in the fight on bee diseases had many times been treating for American when they really had European foul brood. He went on to state that there is a malignant stage of European that looks very much like the American type." This is quite as true of Vermont as Michigan. I have about come to the conclusion that the same treatment should be meted out to it that we give to American foul brood.

When one reads thru a bee journal he is struck with the numerous troubles of beekeepers, especially in wintering; and he is ready to ask why bees could not have been made like ants, freezing up in the fall,

thawing out in the spring, and then going to work. How much honey it would save. Then to go farther, why should we be vexed with insects that de-

stroy our fruits and grain? Why the thousand and one things that make life a constant struggle? Is it not that we may become strong and develop into the highest manhood and womanhood? Were it otherwise, should we not become shiftless and weak and as non-resistant as the grownup babes of Paradise, about whom we read in an old-fashioned book.

Something new is that Standard Honey Grader, advertised on a cover page of the October issue of Gleanings. Its value is too apparent to need discussing. If it can be had at a price that the average beekeeper can afford, there need be no misunderstandings in the future about the grade of honey bought and sold.

The illustration and description of Root's bee-cellar, page 637, makes us almost envious. Think of being able to place several hundred hives in a clean dry cellar of even temperature, away from frost and snow and cold rain and sleet, for four or five months. Isn't it great? But I am consoled when further on the writer says, "If you are wintering well outdoors, do not change over to cellar wintering, even tho you might thereby save a half of your stores." Thank you, our bees winter very well outdoors.

That house-apiary described by H. W. Scott of Barre, Vt., is one of the best I have seen. After inspecting several house-apiaries and nearly breaking my back in trying to get into some of the hives, I had come to have a rather unfavorable opinion of them. In some places such houses seem almost a necessity, and it is a comfort to know that they can be made a success.

Dr. Miller says, page 658, that bees do not always clean up extracting combs when placed on top of a hive above an empty super. Well, they do not always do it here; but, as a rule, they do. By the way, I have had a number of inquiries as to how to get bees to take honey out of unfinished sections. Of course, if any honey is sealed, it should be uncapped, then placed above the brood-chamber and empty super, and laid down flat. If the honey is first placed in a damp place so as to absorb some water, the bees will be still more willing to remove it.

Most of the beekeepers I consulted at our state meeting reported one-half to three-fourths as much surplus honey as last year.

WHEN I was a very small girl every self-respecting family had a "parlor," an awe-inspiring room which was not designed for daily family use

but was kept sacred for company. The most expensive furniture, carpets, and draperies which the family could afford were in the parlor; and the room, unheated in winter except for festal occasions, was kept closed from the rest of the house, with the shades prudently lowered for fear of fading wall paper or floor covering. And that floor covering was generally Brussels carpeting, covering the whole floor and tacked down firmly at the baseboard, to be removed semiannually amid scenes of great activity and confusion, beaten and cleaned and then relaid. I wonder if our children of today ever even heard of a carpet stretcher.

Can't you just close your eyes, you who are old enough, and see one of those old parlors with its high ceiling, its marble-topped tables, its photograph album, its grand "whatnot," its wax flowers under a glass globe, its coal grate with a marble mantel, and horrors! its framed funeral wreath? Justice and the fact that my mother generally reads these articles compel me to state that she was never guilty of that last-named atrocity in household decoration, but I saw one somewhere, long, long ago, and it made such an impression on my childish mind that I remember it to this day.

The room next in importance to the parlor was the sitting room, a cheerful room more nearly corresponding to the modern living room; then came the dining room and then the kitchen. These rooms were apt to be furnished with what was left over or handed down from the parlor. In other words, the best was kept for making an impression on one's neighbors or friends; and the family used the more poorly furnished rooms, including the back stairs, if there were any.

In these days the tendency seems to be to build smaller houses with fewer rooms, to center the family life in one large living room with a generous fireplace, and to use the best we have for the family and not reserve it for guests. And we modern housekeepers realize how important it is to have an attractive, cheerful place in which to serve our meals, whether it is a dining room, a part of the living room, or a dining alcove. We likewise take pride in having immaculate bathrooms with just as good fixtures as the family purse will justify.

Just at this point my legal adviser, (husband, not lawyer) came along, picked up the first sheet, fresh from the typewriter, read it and remarked, "Your page is coming on all right, Stancy, but I fail to see how you can twist it into a food article."

Now I will just leave it to the readers;

OUR FOOD PAGE

Stancy Puerden

you could see I was on my way to the kitchen all the time, couldn't you? When you engage a modern cook she promptly stipulates that she have

the use of the front door, piano, etc. Well, I am modern, too, and I reserve the right to approach the kitchen from the front of the house or in any other way I please.

As I was about to remark when interrupted, nothing pleases me more than the great interest which is being shown in kitchens, kitchen plans, kitchen furniture, kitchen utensils and conveniences, and ways to make the kitchen attractive. It is really astonishing how many articles have appeared on the ideal kitchen in recent household publications, and while these articles differ in many ways they all agree on two points; namely, its furnishings should be so planned as to save steps in preparing meals, and it should be comfortable and pleasing to the worker.

Isn't it true that the increasing interest in model kitchens is due, in no small degree, to the fact that on account of the domestic-help shortage we housekeepers must spend more of our time in the kitchen than heretofore? For some years past most of the girls who have been willing to do housework have not been the sort who appreciate dainty kitchen furnishings or were willing to take proper care of them.

Last month I described to you my little cottage kitchen. For some time I have been doing things to our kitchen here in town, but I am not ready to take you with me into it yet. Maybe, some day I shall do so by way of plans and pictures.

This month I wish to tell you of a time-saver which I lacked space to mention last month.

If you ask the average housekeeper which part of her housework she finds the most irksome, ten to one she will mention dishwashing. This is probably not so much that it is disagreeable work, for it is not if one has plenty of hot and cold soft water and time. But that is the rub; it is the appalling amount of time consumed in washing all the dishes used by a good-sized family who enjoy their three meals a day. Sometimes it actually puts me in an ill humor to read an article telling how to serve a many-course dinner with useless service plates at the beginning and a complete change of china and silver for each course.

Before we went to our cottage in August, knowing we would have more company than at home, I purchased a dish drier which was comparatively inexpensive and proved to be very practical, altho simple in construction. This drier consists of a cylinder of heavy tin, 15 inches in diameter by 13½ inches high. The bottom is of heavy wire netting, about 4 meshes to the inch, and is reinforced

by 3 still heavier wires, crossing underneath. This cylinder rests upon a heavy tin pan, with a supporting ledge some two inches from the top, and both cylinder and base pan have substantial handles. The cylinder has a close-fitting cover, somewhat cone-shaped, thus permitting the dishes to be piled high in the center. All the table dishes for a family of six may easily be stacked in the drier.

When ready to wash dishes the drier is placed on an ordinary chair close to the sink, and as the dishes are washed they are placed in it, cups first, turned down on the netting, the various plates and saucers arranged to drain over these, ending with glasses on top. The cover is then adjusted, water put in the pan below the cylinder, the whole lifted to the range, and the water boiled for five minutes, counting from the time the water begins to boil. The cylinder is then uncovered and lifted to a table or bench and left until the dishes are cold when they will be dry and shining.

Someone told me that the drier would not be very satisfactory for glasses and silver. It is true that wiping with a towel is necessary to keep the silver bright, altho it may well be dried a part of the time in the drier; but don't ever wipe a glass if you purchase one of these driers. When the glasses were turned over on the bottom, beside the cups there were apt to be little drops of water on them; but by a little experimenting I found if they were washed perfectly clean with plenty of soap and then drained on top of the other dishes, taking care that they were tilted enough to permit the water condensed from the steam to run out, they would be perfectly dry and clearer than if a towel had been used. You know towels are apt to leave them slightly linty. You housekeepers know how much time is ordinarily consumed in drying glasses on a towel. In our family, altho we average only six at meal times, we often have about a dozen glasses to wash, especially in warm weather when everyone is thirsty between meals.

Did you ever notice that when a perfectly good man helps his wife by washing dishes he does not use enough soap to remove all grease? When I delicately hinted as much to my assistant on one of the afore-mentioned occasions, he said cheerfully, "Oh, I expect you to do your share. You should finish the job of removing grease by the rinsing and wiping." Now that is just where a man would fall down on using that drier. The dishes must be perfectly clean and free from any greasiness or they will not dry. For that reason I find it teaches a wholesome lesson in dishwashing, not to the nice man assistant, you understand, but to young assistants of the other sex.

One of the best points about the drier is that it sterilizes the dishes, and on account of the heat being gradually applied there is less danger of breakage than when boiling water is poured over dishes standing in a drainer. I might hesitate to put my thinnest

china cups in it for fear the weight of the dishes would break them, but with our everyday English porcelain we have never had any breakage in it, nor have any dishes been cracked or chipped.

The drier is fine for sterilizing jelly glasses and fruit jars and also for cold-pack canning. A friend of mine has canned hundreds of quarts of fruit and vegetables in a similar one and has never had a can spoil.

Good electrical dishwashers are on the market for about \$100.00; but as most of the cooking utensils have to be washed by hand anyway on account of food sticking to them, for a private family I believe this little \$5.00 drier saves almost as much time, as it takes but little more time to wash the table dishes while the water is ready. And while most of us would not feel that we could afford \$100.00 for a dishwasher, there are few families who could not afford the \$5.00 drier. It is a case where money spent is money, or its equivalent, time, saved.

It wouldn't be fair to tell this much without mentioning the drawbacks, would it? The first and chief, for a woman who has a weak back, is that it is rather heavy to lift on and off the range, when full of dishes; but while not a very strong woman I am able to do it, and my young schoolgirl helper thinks it easier than to wipe the dishes. A neighbor who is unable to lift it, stacks her dishes in it, and when her young son comes home from school he lifts the drier to the range and off again when the water has boiled five minutes.

In our home, after the evening meal when my schoolgirl assistant has removed the drier from the range and wiped the silver and cooking utensils which are too large for the drier, she goes on her way rejoicing to the movies or elsewhere, leaving the dishes in the drier until morning, when she removes them and sets the table for breakfast. This method does away with one handling of the dishes.

The second drawback is that the drier is not pretty and takes up a good deal of room. The fact is, it is in use so much of the time that one does not mind giving it space for the remainder. The cylinder dries with the dishes, and the base and cover will dry in a few minutes if inverted in the sink.

You may wonder why you have not seen this drier advertised. An ingenious man in Wooster, Ohio, made one for his wife to save her time, with no intention of offering it for sale, I believe. His neighbors begged him to make driers for their wives, and before long he found himself with a little sideline business. A number of the families connected with the Ohio Experiment Station have used the driers for years, and in this way a man from our town became acquainted with them and secured one for his wife and in a quiet way has taken orders for a few of his friends. I shall be glad to give the address where they may be obtained to anyone sending me a stamped and addressed envelope.

FOR two people to work together at the same hive is "sociable like," Dr. Miller, as you suggest, page 674. But the two I know the most about don't find that system quite such a time-saver as Miss Fowls does. It ought to be (and of course can be), but you see it can be so very sociable that the sociability itself takes part of the time. But who cares? Not these two sideliners!

For that matter, even if sideline beekeepers didn't want to take a certain amount of fun as they go, they almost have to do it in self-defense. It's about their only comfort when they realize how vigorously some of the professionals are opposed to them. Haven't you noticed how they slam us occasionally? Well for us that we keep our consciences clear—use factory hives and clean up foul brood when we get it and keep the grass cut and read the journals and sell our honey for the top price. Even after we've done all this, some of them won't let us play in their back yards. That's why we have to play in our own. And what a good time we have doing it!

* * *

It has been interesting to note how much darker than usual the honey has been around here this season. Everyone thinks it is due chiefly to the rather light clover flow that followed a heavy fall flow; so that in practically every yard left-over aster honey was mixed, in extracting, with this year's clover and locust. That makes it seem quite possible to leave too much honey on the hives in the fall. There is a general tendency among beekeeper writers to advise heavier and heavier winter stores, some asserting there is no such thing as too much. Perhaps not, for the bees; perhaps so, for the beekeeper. At any rate, it behooves him to be careful the next year about mixing the inferior fall honey with the high-grade product of the summer.

In our little home yard, several of our hives, by late September, had a shallow super sealed solid, with bright yellow cap-pings, filled with late summer honeys, probably chiefly smartweed, boneset, and bitterweed, with the bitterweed so predominating as to spoil it completely as a table honey. We had more of it than ever before, and it seems increasing rapidly. It came in July and lasted till nearly October. Waste spaces were bright with it. Now the aster flow is on, further out in the country, promising to be nearly as generous as last year, which was a record-breaker. We don't get much aster here at home.

* * *

One day last week I was watching Rebecca—remember Rebecca?—drawing water at the sink. She was so quickly thru and away,

Beekeeping as a Side Line

Grace Allen

and then so quickly back, that I gathered together a chair, a watch, some hand work and the slate that the favorite neighborhood baby so delights

in, and sat down to watch and take notes. For 35 minutes I was uninterrupted; during that time she made eight visits. It was interesting to notice that she entered the porch from the south end, and, when leaving, swerved out into the open from the east side.

There was practically no variation in the length of the periods she was at the sink getting water—it was almost an exact minute each time. The trip to the hive and back usually took about three minutes, but it varied from two minutes to nearly seven. I tried in my imagination to see what she did there in the hive. But I couldn't, because I don't know. Nectar, carried in the honey-stomach, is emptied into the cells. Is water carried the same way? And is it then given directly to larvæ, or placed in cells? The former, I suppose. I never heard of their storing it.

I didn't touch Rebecca that day at all, not wanting to interfere with her regular plans. But another day we became quite chummy. (I do hope no one will tell Dr. Phillips I said that!) Time after time I stroked her gently, down the wings and back, while she was getting the water, and she didn't mind a bit; or, if she did, she was too polite to betray the fact. And she kept on coming back.

But one day the Favorite Baby and I found her in a pitiful state. All wet and bedraggled, she was trying weakly, to crawl out of some water there in the sink. I think some one must have deluged her, perhaps with water either hot or soapy. I held my finger out to her and she crawled up gratefully. Not, of course, because she knew it was my finger!—and friendly. It was just something dry and convenient. (Tell Dr. Phillips this—if you tell him any!) I carried her into the sunshine, and finally left her on the porch rail. The next day I saw her twice. And never since. Probably the short life was shortened still more by the hard experience that day in the sink.

When you try to realize the uncountable numbers of living things in the world, those that fly and those that walk, those that swim and those that crawl, doesn't it sober you a little, thinking of the hard things that keep happening to them? But surely they'd rather live and take what comes, than not to live. Living is so wonderful.

* * *

Friends of ours, recently leaving Nashville for residence in Colorado, were determined to take their sideline bees with them. They positively declined to sell them here

with the idea of buying others there. They wanted their own bees. So they shipped them out to Colorado, several colonies, without mishap; and the very day they reached their beautiful new mountain ranch, everybody promptly settled down to work—bees and all. Don't you suppose those bees opened some of their compound eyes pretty wide when they first saw the lofty mountain ranges of Colorado after the friendly hills of Tennessee? And do you think it was hard to convince them that the alfalfa of Colorado bore nectar, in spite of the fact that the alfalfa of Tennessee bore none?

* * *

One evening Mr. Allen and I were in one of Nashville's good grocery stores, when we noticed, across the store, a stack of what looked like ten-pound buckets. The only word on the labels that we could read from where we stood was the one word, "HONEY," in large, heavy, black letters. Of course, we went right over to see whose honey it was, and bless you it wasn't honey at all. It was sorghum molasses. Wasn't that a case of tying your string to some one else's kite? This is how the label looked, as well as I can show it on the typewriter, the word "Honey" being far and away the most conspicuous thing on it:

It is Like
HONEY
 Pure
 Sorghum Molasses
 Put up by
 etc., etc.
 Net Weight about 9 Pounds

The clerk assured us it was extra fine, and we later heard so elsewhere. I don't like sorghum myself; but I tasted some of this that a friend had bought and pronounced good. Ugh! The producer says it is like honey, but if honey were like that, I'd never eat any more honey. Yet, I suppose it is good sorghum. Possibly we are not justified, but we thoroly resent that label.

* * *

When I started to get our wax ready for the State Fair, I thought I'd read up a bit first, to see if I might get any new ideas. I was interested to see that while Dr. Phillips in his book advised smearing honey on the vessel in which the wax was to be molded, Geo. Emerson, page 76, 1918 Gleanings, warns beekeepers, if they use old five-gallon honey cans, to be "particularly careful that there be no honey on these cans, for it seems to make the wax adhere to the tin so strongly that it is almost impossible to remove the cake without cutting the can from it." Dr. Phillips and Mr. Emerson both recommend keeping the wax hot a long period, while the Editor, page 134, 1917 Gleanings, says, "it is desirable not to keep it in a melted condition longer than necessary." This second apparent conflict of

opinion is perhaps to be explained by the fact that the longer wax is kept hot, the freer it is from impurities, as they thus have longer opportunity to settle; but it is likely also to be darker.

I took our wax as it had come from the solar, and put it in pans directly over a low gas flame. When it was all melted, I turned out the fire and let it stand until it looked as tho it were about to begin hardening across the top. Then I rubbed honey in other pans, as Dr. Phillips advised (some beekeepers use soap successfully), and poured the wax into them most carefully, being especially particular not to let any of the sediment in. Later, the hardened cakes turned out easily, and were beautiful—receiving much praise and two blue ribbons. One lot, tho, I put into the fireless cooker, experimenting on keeping it hot longer; the objection was that when I took it out later, about half of it had hardened, which necessitated reheating. I was sorry to do this, not only because of the extra time involved, but also because I thought the oftener it was melted, the darker it became. But an old experienced beekeeper at the Fair told me it would grow lighter with each melting. How about this?

One thing that several of us became much interested in was the question which is really the most desirable, and the most nearly perfect color for wax. Among my own cakes, for instance, the two that attracted most attention were of different shades; they might be roughly described as lemon and orange. Some of the exhibitors thought the deeper yellow (it really wasn't orange, tho) the better shade, while others thought the lighter the better. We would all like to know what others think, or if there is a recognized standard. [The lighter-colored wax brings a higher price than the dark. Long-continued heat results in darker wax, whether there is sediment in the wax or not. On the other hand, if one desires a perfect cake, the wax should not cool too rapidly, since this will cause cracks from the inequality of the temperature on the inside and outside of the cake.—Editor.]

* * *

We found a colony queenless last week; as it was rather late to raise a queen, we sent away for a Golden, having never tried one before. Saturday afternoon, Mr. Allen brought in the mail. "Here's your queen," he said, laying the mailing cage on the table, with the beautiful royal Golden inside. "And here's another someone else has sent," he added, producing another cage. Before I could say one surprised word, he had whistled. "There are two queens in this one," he declared. And before I could get one surprised look—"By George, are they all queens?" They weren't; but there were three queens in that cage—three beauties from W. F. Morris of Hendersonville. Don't ask me how he did it, for I don't know. He can do a lot of stunts, can Mr. Morris.



FROM NORTH, EAST, WEST AND SOUTH



In Texas.—The storm of the night of September 14 will take its place in history beside that of the famous Galveston storm. The Corpus Christi storm, as it will be called, centered upon that ill-fated city and its neighboring towns. On leaving the coast, it laid waste a strip of territory 50 miles wide and reached westward to the mountains of west Texas. Following the storm came rain and flood, completing the work of destruction. Everywhere papers and magazines have been filled with the story of the loss of life and the destruction of property. Those interested in bees will notice that the area extends across the famous honey section of southwest Texas. The damage to the bees is great, and at the present time even the owners of apiaries in the edge of the storm area cannot estimate their losses, as high water and bad roads prevent their visiting the yards. Many yards have been blown or washed away. In others, overturned hives were so drenched that all the young brood and even adults were drowned. The overturned hives induced robbing to such an extent that many hives are lost. Not only did the storm damage the bees, but also in the eastern part of this area the honey plants have been so severely torn that little fall flow can be expected. The beekeepers of this section are very hard to discourage, for hardly had the storm passed than they were in the apiaries preparing the storm-shattered bees for the fall honey flow.

The fall honey flow is on, and at this writing (Sept. 25) honey is being gathered all over the State. In east Texas a heavy blooming of goldenrod, boneset, and broomweed has already given a good yield and promises to continue until frost. Heavy yields from boneset are reported. One report gives 34 pounds each from 26 colonies. Broomweed is a remarkable yielder. It occurs in immense quantities and yields best as cold weather approaches. In southwest Texas, the small-leaved sumac and the coma have begun to bloom. These, together with broomweed and a number of minor fall honey-yielders, promise good winter stores. Coma is peculiar in that it blooms from October to February and produces a large amount of honey. Heavy yields from this plant in January are quite common in the lower valley. Among the peculiar plants of the Southwest are those which bloom after rains, the time between the rain and the opening of the flowers being very definite. The yellow rain lily is the first to respond, blooming in about 60 hours, the white brush in about five days, and the mesquite in eight. White brush is peculiar in that it yields little honey during the regular blooming period in the spring, but during the rain-induced blooming periods at this time of the year it yields heavily.

A plant new to us as a honey plant has

come to light this summer. If it has a common name it has not been given. Botanically it is *Brunnichia cirrhosa* and is related to buckwheat and heartsease. It grows in the lowlands of southeast Texas and blooms from June until August, yielding some surplus.

The honey yield has been very freakish in the central part of the State, one beekeeper reporting no surplus at all, and another having a good crop from the same locality. Investigations indicate that this was largely due to the condition of the colonies. Where the hives were very strong this spring a good surplus was stored, but where the colonies were weak they did not build up in time to get the main flows, and consequently they now have just enough for winter stores. The fall honey flow largely determines the strength of the colony the ensuing year. If the supers are full or have been removed and a good flow occurs, the bees in their haste to lay in winter stores will fill the brood-nest with honey and will so restrict brood-rearing that the colony goes into the winter weak and recovers slowly. This very condition occurred last year and is now again happening. It pays well to leave plenty of room until the first of November.

If there is anything in aluminum honey-comb, the beekeepers of Texas will know inside of a year or two. No matter where you meet a beeman, his first question is "How about the metal comb?" Both those who favor their introduction and those who do not, are agreed on one point—that they are going to try aluminum combs.

The loss of property in the commercial honey district, caused by the Corpus Christi storm, has produced a slight flurry in the honey market, as many who were holding honey for a normal price are now almost compelled to sell in order to repair storm damages. This flurry will be of short duration, as buyers will quickly absorb these emergency sales.

Much has been said relative to the white sweet clover as a honey plant in Texas and as to its cultivation. This year this plant bloomed from the first of June until August. In the northeast part of the State where this crop has been planted for some years and where the beekeepers expect a flow from it, it did better than usual; in fact, considerable seed was harvested. That this seed is all right is shown at College Station where a fine stand is now growing. This plot is located on the sides of a ravine and has not been in cultivation for a number of years. The seed was sown broadcast at a rate of 10 pounds to the acre (hulled seed) and disked in. The blooming period at one locality seems to be about four weeks. Where the plants were cut to retard the blooming, bees were not observed to work on the second blooms.

It seems as if there would be another



FROM NORTH, EAST, WEST AND SOUTH



horsemint flow next year; the young plants are showing up well now, and where the seed was sown are so numerous that they must be thinned. Where horsemint grows in quantities its blooming season can be prolonged to almost double its normal length by topping when the plants are about six inches high. This may be done with a mowing scythe. This topping causes the plants to branch out, thus delaying the blooming season and increasing the blooms.

A very interesting thing has come to light in subjecting a partly filled aluminum comb to beemoths. This comb was placed in a pile of worm-infested wax combs. At the end of two weeks it was removed. The only damage done to it by the larger beemoth was to tie webs to part of the wax caps, and to build several cocoons just inside the end-bars. Altho the cells had been drawn flush with the top-bar, there was not room enough for the larger worm to build its silk tube, and consequently little damage was done to the wax addition to the comb; also, the cells were not deep enough to allow a cocoon to be built. Now here comes the interesting thing—the lesser beemoth (an insect almost unknown to the beekeeper because of its confusion with the large beemoth) had been able, on account of its small size, to run its silk tubes between the ends of the metal cells and the wax caps, and also to build cocoons in the metal cells. It must be said in justice to the metal comb that moths would not work on it until it was placed in this pile of infested combs.

College Station, Tex. H. B. Parks.

* * *

In Minnesota.—The annual meeting of the Minnesota Beekeepers' Association will be held on December 3 and 4 at St. Paul in connection with the annual meeting of the State Horticultural Society. An interesting program is being arranged and when printed will be sent to all the members of the association. If beekeepers who are not members will write to the secretary, L. V. France, University Farm, St. Paul, enclosing a stamp, copies of the program will be mailed them.

This year the Department of Bee Culture of the State Fair adopted the score-card system for the judging of honey. The plan worked so well that it will, in all probability, be continued in the future, altho it may seem best to make some changes in the make-up of the cards. The following score-points were used: For comb honey, flavor and true to name of source 40 points, finish 20, color 20, uniformity 10, package 10; for extracted honey, flavor and true to name of source 40 points, body 30, color 20, package 10.

The beekeepers of Fillmore county held their annual meeting at Harmony on the 25th of September. They practically re-

organized their society, forming an association with co-operative features. This section is an extra-good honey locality.

The beekeepers of Aitkin Co. plan for greater things. They expect to form a county organization and hold meetings for discussions along lines of better and more extensive beekeeping. There the bees were bringing in nectar on the 17th of September, and considerable brood was found in the hives. This could not be said concerning some localities in the State. For instance, I had a colony on scales that made a net gain of 160 pounds from June 9 to August 14, but lost 15 pounds from that date to October 3. The weather was of the best, with no frost, bees flying nearly every day, but no nectar coming in and consequently the greater depletion in the stores. The soil here is light, and dry weather seems to have caused the failure of the fall flow. On account of the sugar shortage we predict that many colonies will go into winter quarters this fall short of stores.

Minneapolis, Minn. Chas. D. Blaker.

* * *

In Northern California.—Our honey season for 1919 is about to close (Oct. 5). For some beekeepers it closed some little time ago—in fact there are not a few who will maintain that the season never really opened this year. Thruout our southern portion the season was truly disastrous, and it might be said that during the year 1919 the Upper San Joaquin experienced its worst season in honey production since the beginning of the industry. With the exception of a few cars of orange honey early in the season the honey crop might be said to have been totally a failure. In our central and northern portions we fared better and produced from half to two-thirds of a crop. Alfalfa yielded better north of Merced County, which accounts for the fact that the central portion got half a crop from this source. The fall plants, altho possessing a good growth, did not commence to yield until about Sept. 17. These flowers (excepting blue curls which secreted practically nothing) yielded only half their normal nectar up to the end of September when a rain came and ended their usefulness for the balance of the season. The rain retarded, but did not shut off, the aphid flow along the rivers. Thus, in the central portion beekeepers may expect during October honey from the aphid on the willow, from eucalypti, and possibly some from blue curls. In the northern portion of the State alfalfa gave about half a crop, star thistle better than half, and in most sections blue curls not more than half a crop. Star thistle honey is an excellent product having a very thick body and fine flavor. The body is so heavy that considerable difficulty is experienced in extracting.



FROM NORTH, EAST, WEST AND SOUTH



The ordinary honey-pumps on the market will not take care of the honey satisfactorily, and Oliver Parkes of Davis has had to alter his pump in order to take care of this "sticky stuff," as he calls it. "Flies right out of the extractor and even a bee-veil won't keep it out of your hair," says Oliver Parkes.

For the season we might sum up the average production per colony as follows: South of Stanislaus County about 10 pounds per colony, and north of Stanislaus County about 60 to 80 pounds per colony, with perhaps a few favored localities as high as 80 to 120 per colony. The crop, as a whole, this year was darker in color than during normal years. In Inyo and Tuolumne counties beekeepers experienced fair crops. In the latter county it should be mentioned that H. H. Sherrard of Sonora is now bee inspector.

The Alameda County Beekeepers' Association is a live one. Cary W. Hartman is president and Ralph B. Calkins secretary-treasurer. The Association holds monthly meetings and has an excellent and wide-awake secretary in Mr. Calkins. His address is 5800 Hearn St., Oakland. The shorthand report of Government lecturers on beekeeping, as held in this State last winter, is the work of Mr. Calkins. These Short Courses conducted by Dr. E. F. Phillips contain in a condensed form a great deal of excellent and useful material.

Modesto, Calif.

M. C. Richter.

* * *

In Southern California.—One of the most destructive, as well as extensive, forest fires that ever visited southern California occurred since our last report was sent in. To speak more explicitly, three large fires were burning at the same time, one of them being in what is known as the San Gabriel watershed, lying north and east of Los Angeles. One was in the San Bernardino Mountains, near the headwaters of the Little Mojave River, and the third was farther north in the Little Tiajunga Canyon and reached nearly to Acton. In all about 150,000 acres were burned over. Altho not nearly all of this territory was occupied by apiaries, yet part of it was, and much more of it would have been if better roads had been built.

The wild sunflowers are blooming over thousands of acres of the grain lands of southern California, but apparently little honey is being stored from them. They come up after the cultivated crop has been harvested, and they bloom until winter.

The Southern California Beekeepers' Association held a two-days' picnic, Sept. 19-20, at North Kingsley Drive and Santa Monica Boulevard, Los Angeles. About 200 were present. Beekeepers were in attendance from as far north as Sacramento. Among

the speakers were Mr. Buchanan of Glendale, Inspector DeSelle of Los Angeles County, T. O. Andrews, inspector of Riverside County; and Editor Knabenshue of the Western Honey Bee.

California apiarists are again to be favored with a series of short course lectures to be given at Davis, Fresno, Riverside, and San Diego.

How long the beekeepers will endure the crowding and heavy shipping in of bees to our orange territory is a question yet to be answered. A man from one of the Middle-west States says, "We are going to ship 500 colonies to California in November and expect to unload at — (naming an orange district already well stocked with bees). We who live here and have apiaries located on the dry sage and buckwheat ranges, feel that we should have first chance on the orange locations. A while ago I hinted that it might sometime be necessary for our own protection, to pass laws against the shipping in of bees from other States. Nevada allows no bees to be shipped into the State on combs, and so makes it necessary to ship there in pound packages. Imperial County has for several years allowed no bees to be shipped in from the outside territory. There is much feeling among the beekeepers here that it is not a square deal to have thousands of colonies of bees set all around them every winter, ready to take the cream of the orange-honey flow and then to pull out in the spring for other places. It is all very well to talk of that brotherly feeling, but anybody who does not live and keep bees in or near the orange groves, has little conception of how this business has grown. From the general condition of the bees, I believe that southern California beekeepers will need all of the orange flow they can get in the spring of 1920 in order to get their honey-gatherers in condition for the summer flow. I do not want to be selfish in this matter, but I will have to agree with some of our oldest living writers that it would be well if we had some way of establishing the distance between apiaries and dividing the ranges equitably among the apiarists.

A number of beekeepers have been feeding considerable sugar for winter stores. Others say that they are going to feed later — about the last of November — feeling that it is too much of a stimulus to brood-rearing to feed early. We have just had quite a rain over southern California, and, with a warm fall, the bees should still be able to gather some nectar on many of our ranges.

Corona, Calif.

L. L. Andrews.

* * *

In Michigan.—Beekeepers who are unable to secure sugar in time to do the fall feeding for winter stores should not let the matter rest there and just



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hope that the bees will winter. At the first opportunity, sugar should be secured and made into bricks of hard candy. This food can be given at any time during the winter and the colony kept alive until it is possible to feed liquid food in the spring.

The many Michigan friends of P. W. Erbaugh, formerly Deputy Apiary Inspector, will be pleased to learn of his safe return from France and of his recent marriage to Miss Carol Fribley of Bourbon, Indiana. It was hoped and expected that Mr. Erbaugh would resume his former work in Michigan, but a much more remunerative position has been accepted by him in Indiana. His home address is Bourbon, Ind.

The clover continues to appear in spots where it seemed that the drought must have killed it. Next season's prospects are "looking up." The forest fires in the northern part of the State have burned over thousands of acres. While the raspberry has been destroyed in such places for a time, just the right condition has been made for an excellent growth of fireweed next year. A crop of fireweed honey is worth making some special efforts to secure.

The Government estimate of 29 lbs. per colony for Michigan seems to be liberal when only the summer honey crop is considered. However, many sections in the southern half of the State have had an unusually good fall honey flow. In the vicinity of Lansing the fall crop averages from 20 to 25 lbs. per colony. The principal source of this honey was goldenrod. This is particularly appreciated in view of the scarcity of sugar. A large part of the State, of course, was not so fortunate, and it is to be feared that the mortality this winter may approach that of two years ago.

Last winter was particularly favorable in Michigan for the wintering of bees outdoors, with little or no protection. It should be borne in mind that the chances are very much against having such a mild winter this year. Many of the exponents of little protection have pointed with pride to their success of last winter. How distinctly we remember the colonies that wintered successfully without protection, and how easily we forget that from 50 per cent to 80 per cent have died or just barely survived other winters of the past! It may be a happy trait of human nature to forget our troubles and adversities, but when applied to the bee business it sometimes proves a very unwise and expensive habit.

By action of the Executive Committee of the State Beekeepers' Association, the annual convention will be held in the first half of December, the tentative date decided upon being the 9th, 10th, and 11th. An effort is being made to secure a number of outside speakers, and the date may have to be changed a day or two to accommodate them. It is hoped to bring together at this convention some of the most successful hon-

ey-producers in the middle West. The program will be divided into beginners, professional, social, and business sections. A complete announcement will be made in the December issue and will reach the readers in time to come to the convention. Advance programs can be secured from the secretary, B. F. Kindig, East Lansing, Mich. These will be ready for distribution about Nov. 15.

By the co-operation of the Extension Department of the Agricultural College and the office of the State Inspector of Apiaries, it is possible to offer to the beekeepers of the State a series of two-day Beekeepers' Schools. It is planned to hold a two-day school in each of 63 counties of the State having either a county agent or a county beekeepers' association. The work will be started between the first and the fifteenth of November. Anyone particularly interested in these schools should write the State Inspector of Apiaries, East Lansing, Mich., for a schedule of the schools and a copy of the program that will be presented. It is impossible for the thousands of beekeepers of the State to attend the College Short Courses. We therefore feel it necessary to carry as much of the work as possible directly to the beekeepers in the form of these schools.

The committee appointed at the summer convention of the State Beekeepers' Association to meet with the representatives of the Federal Bureau of Markets for the purpose of formulating plans for launching a Michigan Honey Producers' Exchange met at Cadillac on October 8. After a thorough discussion of the various plans of handling the marketing problem, it was decided to ask the Michigan Potato Growers' Exchange to take on honey as another line of their activity. The committee will meet with the directors of the exchange on October 13 for the purpose of asking them to form a new department for grading, packing, and selling honey. The Exchange already has a well-established organization with about 85 local shipping associations and a yearly business of several million dollars. It seems that by combining with the Exchange the work would be very much simplified, as they already have every facility for doing business profitably and efficiently. The Exchange not only handles potatoes but also apples, small fruits, grains, seeds, and other farm products, and in addition has a purchasing department which buys all kinds of supplies needed by the members. Whatever action is taken by the committee will of course have to be ratified by the convention of the State Beekeepers' Association in December. B. F. Kindig.

East Lansing, Mich.

* * *

In Ontario.—Following a cool August, we have had here in Ontario unusually mild weather for September and October up to date (10th). I fed up



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one yard during the middle of September, as in that yard there had been no late fall flow, and brood-rearing stopped early altho beehives were very populous. As more or less pollen has been carried in during the past three weeks here at home locations, I have been wondering if the early-fed bees might not use up a lot of stores in brood. But they cannot rear much brood, as they were fed so much at the time of preparing for winter. This apiary winters in a cellar, and the friend who lives on the farm where the bees are, puts them in for me, so I do not see them from late September till the following spring. Last winter they received no attention whatever after being put in the cellar, and, judging by results, they were just as well off, or perhaps better off than they would have been, if I had been there to tinker with them now and then, worry about the temperature of the cellar, the amount of dead bees on the floor, some uneasy colonies, etc., etc.

While these bees were fed early, owing to the brood being out of the combs early, here around home where we had buckwheat all August, just the opposite is the case and we still have a lot of feeding to do. Generally speaking, after the first of October we are rather hampered by the weather being too cool, but this year we cannot make the headway we would like because of such warm weather. It is not safe to feed much before 5 P. M. on account of the danger of robbing, while other years I have commonly fed at one yard in the forenoon and another in the afternoon with no robbing. All of which goes to show the need of different methods of management, so far as locality and weather are concerned.

A news item in the Toronto Globe says that a new apiary building is to be put up at the Guelph Agricultural College, the work to start right away. The building is to cost \$40,000, and is to be of brick with stone foundation. It will be two stories and a basement. A building of this nature has been wanted for some time, and evidently the "powers that be" have at last been convinced of the necessity for better accommodation for the provincial apiarist.

In the last issue of Gleanings I stated that comparatively little honey had been sold yet, but for the last few weeks there has been an increased movement. Yet little seems to be going into the hands of the wholesalers; especially is this true of the clover honey. Most of the buckwheat goes to large dealers in Montreal every year, and this season is no exception. Most sales of honey seem to be between producers and retailers, altho of course, the usual trade is done also between producers and consumers. Last week while at Toronto I went into some of the wholesale houses, and in several cases they had not a pound of extracted

honey and seemingly did not wish to load up with any, being afraid of a slump in prices, I was told in one case. Some beautiful comb honey from eastern Ontario was displayed in one house, and it was being sold to the trade at 45 cents a section. The dealer stated that it would probably bring 60 cents at retail. Comb honey at 60 cents comes under the head of a luxury, and, needless to say, there is a very light crop of this article in Ontario this year.

The sugar situation is easier now, but the price is high, the present quotation being \$11.21 f. o. b., Toronto. While some have been delayed in getting sugar, the unusually mild weather will allow them still to get their bees in good condition for winter. Personally, I have had more feeding to do than for a number of years past. Bees are going into winter quarters in good condition, as a rule, altho European foul brood has weakened many apiaries. My own bees are seemingly in good average condition, but the clusters are not so large as in some years.

The Ontario Beekeepers' Convention is to be held in Toronto on Nov. 11-13. Don't forget the date and don't forget to come and see us. A hearty welcome is extended to beekeepers from "over the line" to come and spend a good time with us.

Markham, Ont.

J. L. Byer.

* * *

In North Carolina.—The honey season for North Carolina is just closing. It will scarcely last longer than October 15, about which time killing frosts are due to choke off the final honey flows. The season in this State has been about a fair one in honey production. The mountain regions have enjoyed quite a good season, except for "near failure" in some localities where sourwood was the chief source of nectar. The Piedmont section has had a fair season, while the eastern or swampy regions have, as a rule, made a poor showing, due chiefly to long seasons of rain coming in the midst of important honey flows.

It is a generally noted fact, however, that where there are intelligent manipulation of bees and the use of improved hives and appliances, the honey crop has shown a distinct increase, most adequately rewarding the beekeeper who gives his bees this sort of care.

It is noticeable all thru the State that the old gum and box hives are giving place to the improved "workable" hives, and important commercial apiaries are springing up especially in the mountains and the coastal sections of the State where the most abundant and long-continued flora is found.

Raleigh, N. C.

W. J. Martin.

HEADS OF GRAIN FROM DIFFERENT FIELDS

Uses Hood of Filter Cloth for Protection.

You may sing of the flowers, the birds, and the trees; I will sing of her majesty, Queen of the bees; you may drink to the bard, and the bold cavalier; I will drink to her Ladyship, none is her peer. All her movements are graceful, her carriage is proud, as she glides thru the palace, or mounts to the clouds. Oh, say, you can see, as she trumpets her call, every subject is loyal, responds one and all.

Oh, the hum of the bee is sweet music to me—I could sing more of that if I wanted to, but I don't want to, not just now. What I wanted to say was that it makes me laugh to see the "professionals" specify and argue about how to winter bees and how they should be stacked up or grouped together and boxed up and packed in this or that and buying lumber and sawing boards and carrying straw, etc.

I always winter on the summer stands. All I do is make a "hood" out of old filter cloths, which are practically rain-proof and wind-proof. I make them so they will just slip over the hive, and cover the hive with one shallow super on. The empty super I fill with burlap. For weak swarms I cover with burlap and building-paper for additional protection, and put the hood on over these. I never lose a swarm unless I neglect to see that the bees have sufficient food. The hoods cost me less than five cents each, and I could store a hundred in my trunk if I wanted to, but I don't want to.

When I have a swarm that is troubled with robbers, I slip over it the hood, which

acts as a camouflage, and discourages "porch climbers." I never use any tar paper around my hives. My bees are nice, clean bees and they don't like the smell of tar. I know they don't, for I have been "eavesdropping" on the little scamps for about 30 years and know some things that I never read in any of the "all-about-bees-and-more-too" books. J. F. Weybright.

Ft. Morgan, Colo.

Entrance Accidentally Closed. Colony Apparently Approved.

Beekeepers differ as to the proper size of the winter entrance where bees are wintered on their summer stands. I have had an experience which convinces me that if the colony is in good condition it needs very little ventilation.

Most of my bees are in ten-frame hives and are run for extracted honey. I winter on summer stands, use telescope covers, and pack paper between hive bodies and covers. Normal colonies are allowed a $\frac{3}{8}$ -inch entrance the full width of the hive.

Last fall I delayed packing the bees until early in December, and I think you will agree with me that vigorous hybrids are apt to offer very pointed objections to being handled at that season. In order to avoid argument while the packing was being done, a piece of lath was shoved into the entrance and left there until the bees quieted down. On March 15 it was discovered that one lath had not been removed and that for more than three months the colony had not had a flight and had practically no ventila-



Apiary of W. A. Rowland, Weston, Ontario.

HEADS OF GRAIN FROM DIFFERENT FIELDS

tion. The colony was found to be in good shape; bees and combs clean, good stores, and brood-rearing progressing finely.

Granville, Ill.

Edwin O. Gunn.

Reese and Knight Move Colonies Successfully.

Reese and Knight, who have bees on the Twin Falls Tract as well as several yards in Utah, shipped 325 colonies in a car June 20. It was very hot at the time, and, as I hauled and helped place them in yards when they



Truck load of bees hauled by Reese and Knight.

arrived, I had an opportunity to see for myself the result of such a shipment under hot conditions. The colonies were loaded in the car with 2 by 2 strips between each tier, and wire screen on the top and bottom of each colony. Water was used several times on the trip. The result was one colony drowned, while the balance came thru in good condition. We moved this car load by three truck loads, 108 colonies to the load, using the two-inch strips between tiers. They were hauled several miles to different locations in the sagebrush close to the irrigated fields.

M. C. Ware.

Twin Falls, Ida.

Bees and Honey at Spokane Interstate Fair.

There is an unusual lack of interest on the part of beekeepers in making exhibits at fairs in this part of the country. The exhibits in the bee-and-honey department of the Spokane Interstate Fair this year were the smallest in many years. It is the intention of the Fair management, and a few local people who are interested, to see what can be done toward creating more interest in the apiary department next year. Premiums to the amount of \$132 were awarded, most of which were taken by J. E. Whitefield, E. D. Kingsland, and Mrs. M. E. Baker.

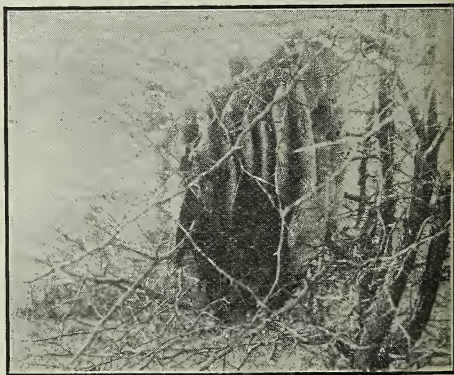
The Spokane Seed Company had a full colony of Italian bees in a wire cage perhaps six feet high and four feet square,

which were handled daily by the writer, showing just how a hive is opened, the frames of comb and bees removed, the queen found, and then the frames replaced.

The bee and honey exhibits were judged by the writer, who remained with the exhibits during most of the time of the fair, and who was quite surprised at the interest manifested by many in beekeeping and honey production in the Northwest. It will be his endeavor, as well as that of the Spokane Seed Company, to do everything possible to spread apicultural information thruout this part of the country, and, if possible, increase the production of honey thru the keeping of more bees in a better and more efficient manner. We see no reason why, thru a systematic effort, this can not be accomplished during the next two or three years. It is a piece of important conservation of resources that should be pushed to the farthest limit.

George W. York.

Spokane, Wash.



This large colony together with their eight combs was found suspended from a limb late last fall by F. E. Hawkins, Copley, Ohio.

Why Invalids Should Prefer Comb Honey.

Page 856, 1917 Gleanings, details the recovery of an invalid by practically making honey his chief diet; and the patient pointed out that it had to be comb honey, not extracted, which last did not react so well on his system. Mr. Fuerden, who reports it, does not seem to guess the cause.

Now, let's see: Why do so many of us after dinner fish out a nickel package of chewing-gum, and proceed to imitate the family Jersey thru its mastication? Said gum's advertisers will tell you in yard-high letters that it promotes digestion by increase of saliva. And I am inclined

HEADS OF GRAIN FROM DIFFERENT FIELDS

to believe there's something in it, as the damsel said before shaking a live mouse out of her stocking.

Well, translating this into terms of bee-dom, isn't it quite likely that Nature knew what she was about, and supplied the indigestible wax with the honey to compel chewing, and thus give the honey the needed saliva for its right digestion? That's my guess.

John Preston True.

Boston, Mass.



Fifty-seven.

(With Apologies to
Walt Mason.)

Winter winds begin to bluster, and the bees now form a cluster.

Thus they make a ball of bees, with outer shell so snug and tight, that within they're warm and cozy, where they dwell so pink and rosy, keeping every remote corner 57 Fahrenheit. Some must keep awake and chipper, fighting Jack Frost's piercing nipper, for the heat is made by active bees within the inner court. Outer guards, all in a shiver, speak with voices all a-quiver, "Girls, she's down to 57,

speed the action in the fort." So they start fantastic prancing, buzzing, wrestling, and queer dancing, squirming faster when it's colder, thru the winter long and punk. When it's under 57, stealthily this beastly leaven works, converting healthy bees into a pile of living junk. Then their squeaky joints are rusty, and their honey-sacs are musty; they have rheumatism in their backs and ashes in their grates. Can they last till Spring's returning, while their jaded lives are burning day and night so every nook its 57 indicates? Let us give them winter packing now, to save their frames from racking. Then, by heck, we put a check on these gymnastic monkeyshines. Packing helps them fight their battle thru the storm's wild roar and rattle, saving them the under-57 chill along their spines. Just to keep this timely warning right before us night and morning, twenty million signs, put up by Heinz, are glaring everywhere; and his blatant 57 speaks in languages eleven, "Pack your bees so snug and warm that 57's always there."

Bill Mellvir.

Here and There.



THE BACK LOT BUZZER.

How's a fellow to know what the new European fowl brood looks like, when Phillips, Root, Miller, etc., all get fooled.

Ma says it reminds her of what Josh Wise once said, "What's th' use of knowin' so much, when so much of what you know ain't so?"

QUESTIONS.—

(1) I have some extracted clover honey of the 1918 season, which has soured. It is the first time this has ever happened with me, and I am at a loss to understand it. This honey was left in the combs from the clover flow of 1918 until I extracted it this spring in June. It was at least three-fourths sealed over, and I am sure it was well ripened. I stored it in a building that was dry but subject to freezing at times. Would this affect the honey? (2) Must honey be kept in an air-tight container? (3) How long will well-ripened extracted clover and buckwheat honey keep? (4) I have a quantity of this honey, and I should like to know if it can be used next spring for stimulating the colonies. Would heating it help when feeding?

Frank M. White.

New York.

Answers.—(1) If the honey was perfectly ripe we should not expect it to ferment unless it became damp from being exposed to damp atmosphere, as in the case you describe. The dampness of the atmosphere doubtless combined with the honey in the unsealed cells, and fermentation resulted. When honey is extracted from the combs and put in tin cans it may be kept for years provided it is ripe at the time of extracting. (2) It is not necessary to keep honey in air-tight containers. (3) We have kept both for years. (4) If the honey has become granulated, you will, of course, want to heat it and get it in liquid condition, and also dilute it with some water before feeding. It may then be used as feed in the spring, if free from American foul brood germs, but would not be fit for winter stores.

Question.—I have five strong colonies, but they did not store as much honey in the supers as they should have done according to the abundance of white clover and other flowers there have been this summer. What was the trouble?

Wisconsin.

Albert Guthu.

Answer.—This season was very unusual in many localities; and where there was an abundance of bloom there seemed to be but very little nectar in it, so that the bees made little or no honey in many places. If your colonies had good queens, and were strong, the fact that you got no honey was probably not due to the bees but to weather conditions. We are all hoping for a better crop next year.

Question.—I had a very weak colony in the spring—only a handful of bees. I gave them a frame of brood to help them along until I had a fair-sized colony. Then on July 8 I gave them a frame of brood with a queen-cell which they accepted, and the colony built up very rapidly. In August I raised four frames to the upper story with an excluder between; cut out queen-cells above, and gave them the once-over every week to see their progress. On Sept. 1 I put the bee-escape on, intending to take off the super, but found they would not leave the super. On examining I found a queen above, and also one below—no brood above, and no eggs. I gave the upper super an empty frame to see if the queen was fertile. On Sept. 8 I found eggs in the upper super and set it aside and gave three other frames of brood from other

GLEANEED BY ASKING

Iona Fowls

colonies. How did the queen get in the upper super? Why no brood, altho they had room there? Did I do right by setting aside, or should I have put the queen below and killed the lower queen? The lower queen is only two months old. I have had several during the season in which I found mother and daughter working side by side, but the above I cannot fathom.

John A. Braun.

New York.

Answer.—If there were enough bees to make two good colonies, then you were right in setting them off to one side as you did, provided also that the queen was a good layer. Of course, if you saw only eggs and no sealed brood, it might be that when tearing down cells you missed one and a queen was raised in the upper story, never had any chance to mate, and was, therefore, a drone-layer. In this case the brood would by this time tell the story, for, of course, it would be drone brood. If you find the queen above was a laying queen capable of producing worker bees, then there must have been an entrance to the upper hive where she was able to leave and be mated; or else you had two queens in the lower hive at the time you put the bees and brood above, and accidentally put one of those queens in the upper story. Of course, it would have been unusual to have two queens in that lower story; but at the time you gave the colony the queen-cell it may be that they already had a laying queen that was old and playing out so that they were willing to accept a new queen and at the same time tolerate the old one.

Question.—Will it injure the bees to paint hives containing them?

Thos. M. Keller.

Illinois.

Answer.—If a great many hives are to be painted, a cool time should be chosen so that there will be no danger of the bees flying out and alighting in the fresh paint. When but a few hives are to be painted, plenty of drier should be used and the hives painted along toward night. The odor of the paint will not injure the bees in the slightest.

Questions.—(1) If I take a queen from among the workers while clustered on a tree, can I put her in a cage with a section of honey and preserve her for future use? (2) Will the workers return to their parent hive and stay? (3) Will a queen pass thru a one-way Porter bee-escape with the workers? (4) Can a queen sting while one is clipping her wings?

E. R. Webb.

New York.

Answer.—(1) The queen would die in a short time if no attendant bees were left with her. If she were put in a queen-cage with a few of her own bees, and the cage provisioned with a good queen candy, she might be kept easily for a week or more. (2) If one finds a queen in a cluster like that, unless this is a first swarm he can not be certain that there are not other queens

there also, so that, after removing one, it would be quite possible for the cluster to leave for new quarters. If no other queen is left with them, they would, of course, return to their hives. (3) Most queens are too large to pass thru a bee-escape as the workers do. (4) Reports of queens stinging when being clipped are very rare indeed. We have clipped thousands, but never have been stung by one.

Question.—Please give me your opinion as to how many hives of bees could be kept *profitably* on a five-acre orchard (apple) tract. The trees are eight years old, and the tract is surrounded by other orchards, perhaps a hundred acres within two miles.

Washington.

C. R. Gale.

Answer.—Simply for fertilizing the five-acre orchard you would probably not need more than five colonies. If you are thinking of the honey to be obtained in the spring from not only the five acres but also the hundred acres surrounding, we would think that an apiary of perhaps 30 colonies would be about right. The fruit trees would help greatly in the brood-rearing in the spring, but of course in order to get a good crop of honey you would have to have some other good source of honey later on in the season, since you could not depend upon your fruit trees for your main source of honey. The honey is good for building up colonies, but is of poor grade and not very good for surplus honey.

Question.—A local paper had the following: "An Indiana beekeeper has succeeded in breeding a race of stingless bees. They are a cross between Cyprian drones and Italian queens. These bees gather more and finer honey than their armed cousins, and also resist disease better." Will you kindly inform me what you know about them and their alleged advantages in industry and resistance to disease?

Connecticut.

Raymond L. Hills.

Answer.—The clipping you inclose has already been called to our notice. There are two great genera of stingless bees which may be found from the southern boundary of the United States as far south as Argentina. These bees are quite inferior to the ordinary strains of hybrids and Italians, producing a much smaller amount of honey. Evidently the story of these stingless bees has become somewhat distorted in the telling, for certainly we know of no cross between the Cyprians and Italians that is stingless. In fact, Mr. Mel Pritchard says his experience is that this particular cross between the Cyprians and Italians is among the most vicious of bees, that their honey-gathering qualities are only ordinary, and that they are not nearly so immune to disease as the Italians.

Question.—Would it be advisable to move bees within 2½ miles of a smelter? I think this is a lead and zinc smelter. I understand that the gas from this smelter kills the vegetation near by. What would you consider a safe distance?

Illinois.

Carson Donnell.

Answer.—It has been repeatedly shown that colonies of bees may be affected by gas from smelters anywhere within a distance of five miles, and therefore we would con-

sider the location you suggest too near the smelter. To be sure, if there is plenty of forage for the bees near the apiary they are not likely to fly a distance of five miles, and yet the fact that the gases extend a considerable distance from the smelters and that the wind often blows them some distance further makes it desirable to locate further away than five miles.

Question.—Are there any laws about keeping colonies on a city lot?

F. A. Clark.

Pennsylvania.

Answer.—We do not believe you will find any law preventing your keeping bees in town so long as they give no trouble to passersby. Of course, if they prove themselves a nuisance it would be necessary to move them. According to law, if bees make trouble the owner is not considered liable unless he has been previously notified that the bees had been making a disturbance, and he has allowed them to continue to trouble passersby. Then in case damage is done he would be considered guilty of negligence.

Question.—Would creosote or some of the coal-tar derivations do instead of paint for hives? In this climate untreated wood seems never to quit drying up and getting smaller. Is it the usual practice of most beekeepers to paint the inside as well as the outside of hives?

J. B. Miller.

Wyoming.

Answer.—It is not necessary to paint the inside of a hive, since the bees propolize all the cracks and crevices themselves, and it is not exposed to the weather. We do not think that creosote or coal-tar products would be very acceptable to the bees if placed inside the hive, since the odor would be objectionable to them. We at one time used coal tar on some covers, but found it very unsatisfactory. In very warm weather it has a disagreeable way of adhering to hands and clothing. We believe most beekeepers would prefer paint.

ANSWER BY JOHN H. LOVELL.

Question.—I am inclosing a sample of clover I have found growing in great profusion on some land we recently purchased. The clover grows as vigorously and is as large as red clover. It has all the characteristics of white clover except size. The bees were busy at work on it during last June. Honeybees, bumblebees, and the smaller varieties of bees and butterflies were all busy. I should be glad to have its name.

E. G. McCormick.

Arkansas.

Answer.—The name of this plant is buffalo clover (*Trifolium reflexum*). It grows wild from western Pennsylvania to Texas, and southward (thru Arkansas) to Texas and Florida. The standard or large upper petal is rose-red, while the wing and keel petals are white; thus while the heads are nearly as large as those of red clover, in color they are suggestive of white clover. As in white clover, the flowers are reflexed and turn brown with age. In view of the short and comparatively large corolla-tube, probably all the nectar can be reached by honeybees; and as it is freely visited by honeybees, bumblebees, and smaller bees and butterflies, it is, no doubt, a good honey plant.

THE Bureau of Entomology in co-operation with the Extension Services of the several States will conduct extension short courses for commercial beekeepers this fall as follows:

North Yakima, Wash., Nov. 10-15; Davis, Calif., Nov. 17-22; Fresno, Calif., Nov. 24-29; Riverside, Calif., Dec. 1-6; San Diego, Calif., Dec. 8-13; San Antonio, Texas, Dec. 15-20. These courses will, in a general way, be like those given last winter in California, New York, Indiana, Iowa, and Minnesota, and like the Chautauqua recently held at Madison, Wis. Messrs. Phillips, Demuth, and Sturtevant of the Bureau will assist in these meetings, and the remaining time will be occupied by local beekeepers and local extension men. In Washington, H. A. Scullen, Special Field Agent of the Bureau, will assist. One additional extension short course may be given on this circuit; if so, we shall give the announcement later.

The general plan of the course is for Messrs. Phillips and Demuth to discuss the care of bees thruout the year, giving the behavior of the bees and the application of this to beekeeping practice. On Wednesday afternoon, Mr. Sturtevant begins a series of lectures on disease, ending Saturday morning with a discussion of treatment. Mr. Sturtevant will have laboratory equipment for examining samples, and beekeepers are invited to bring samples of diseased brood. Further particulars may be obtained by addressing the State Extension Director at Pullman, Wash., Berkeley, Calif., and College Station, Texas. These courses are, of course, free.

The new editor of the Western Honeybee, as stated in the September issue, is the Hon. S. S. Knabenshue, who has been a teacher, publisher, and for twenty years managing editor of the Toledo Blade. He has also served five years as American Consul at Belfast, Ireland, and five years as Consul General at Tientsin, China.

The Eastern New York Beekeepers Association will hold their twelfth annual convention in the Supervisors' room at the Albany County Court House, in Albany, N. Y., on Thursday, Nov. 20, 1919. Prof. Geo. H. Rae, extension specialist in apiculture, and other live beekeepers are expected to be present and address the meetings. Sessions at 9:30 A. M. and 1:00 P. M.

Stephen Davenport, Sec'y.
Indian Fields, N. Y.

New Hampshire beekeepers are getting in line. On Aug. 19, the New Hampshire Beekeepers' Association was formed at Durham

JUST NEWS

Editors

College, with about 75 present. Various speakers were heard, among whom were Prof. Wolff, the college apiarist, who gave a demonstration and

talk on bees; Allen Latham, who spoke on "How to Produce the Maximum Honey Crop"; and Mr. Selser, who spoke on foul brood.

The annual meeting of the Michigan Beekeepers' Association is to be held at Lansing on Dec. 9 and 10.

The Western New York Honey Producers' Association will hold their regular annual convention on Friday and Saturday, Nov. 14 and 15, 1919, at the Genesee Hotel, Buffalo. Those desiring programs should address the secretary, Howard M. Myers, Ransomville, N. Y.

Members of the Honey Producers' Associations of Douglas County, Neb., and Pottawatomie County, Iowa, joined on Sept. 6 in an educational and social meeting at the home of W. A. Jenkins, Omaha, Iowa. Among the speakers were H. C. Cook, Myron H. Swenk, Prof. W. H. Brokaw, Dr. E. W. Atkins, Otto Timm, and Earl G. Maxwell.

The 29th annual meeting of the Illinois State Beekeepers' Association will be held at Springfield on Dec. 9-10. The matter of a change in the membership fee will be considered. A good program is planned, and postals will be sent to the members as usual. Prizes, as usual, for essays. Let's have a crowd and a good time. Headquarters at Leland Hotel. Jas. A. Stone, Sec.

The 39th annual convention of the Ontario Beekeepers' Association will be held in the Carls-Rite Hotel, Toronto, on November 11, 12, and 13.

Following are the speakers and subjects: Wm. Agar, Kleinburg, "Beekeeping in New Ontario"; J. L. Byer, Markham, "The Selection of a Location for Beekeeping"; Prof. L. Caesar, Guelph, O. A. C., "Spraying and Its Relation to Bees"; D. A. Davis, Birmingham, Michigan, "Importance of Queens and Simple Methods of Rearing"; C. B. Gooderham, Central Experimental Farm, Ottada, "Experimental Work in Beekeeping"; R. F. Holtermann, Brantford, "The Production of Honey"; Prof. J. E. Howitt, O. A. C., Guelph, "The Beekeeper's Part in Food Production"; Harry W. Jones, Bedford, Quebec, "Feeding and Stimulative Feeding"; F. W. Krouse, Guelph, "The Deep Hive"; R. W. Muckle, Winnipeg, Man., "Beekeeping in Western Canada"; John Myers, Stratford, "What Would Beekeepers Like to Know."

IT has occurred to me time and time again that in the distribution of publicity in bee literature, Mississippi has been unjustly neglected. For

instance, in the A B C and X Y Z of Bee Culture mention is made of scrub palmetto, gallberry, and titi being present only in Florida. Our own coast country is a vast out of land covered with gallberry. The streams are lined with titi, and the swamp areas, of which there are many, are full of tupelo gum. From observations that I have made on the coast this past year I see no reason why, if this part of the country were given some publicity, there would not spring up some commercial apiaries. Is there not some way in which we can introduce into the unborn literature the fact that important honey plants of the Apalachicola region of Florida are present right here in Mississippi in sufficient quantities in many localities to make this State advance in its commercial output?—Robert B. Willson, Ok-tibbeha County, Miss.

According to the latest report from Britain, quite a new and valuable use has been found for the sting of the bee. While presiding at a lecture at the Scientific Exhibition in the Central Hall, London, England, W. T. Reid, late president of the British Beekeepers' Association, said he had recently made a most useful discovery. He found that the poison from the sting of the bee was an almost infallible test as to whether a person was liable to succumb while under an anaesthetic. If a person suffered from nervous weakness, a bee-sting on the hand would cause a large swelling and affect the glands of the body. A person so affected should not be operated on.—John Y. McLeod, Ontario, Can.

On April 28 this year I caught a swarm of bees. They were very industrious little workers, but the little red ants played mischief with them so that I had to make a bench to put the hive of bees on. The legs of the bench I put in cans filled with oil. The bees are very friendly and show no fight toward me at all, only toward the ants. They are so friendly that they will light right on my hand and eat out of it. Just now they are very busy carrying yellow stuff in on their legs. My bees do not work until the dew is dried off and then stay at it until pitch dark. The bees are small black ones with yellow stripes on. — George B. Stout, Iberville County, La.

My winter case is an extremely cheap case, and nothing better, for each hive can be left on its individual stand. I secure large packing cases from a branch of the Wanamaker store. The material is tongued and grooved, usually $\frac{3}{4}$ inch thick, and

BEES, MEN AND THINGS

(You may find it here)

large enough to make a bottom-board, the case, and a telescoping cover. These cases cost 25 cents each. The cover is covered with two-ply rubberoid roof-

ing at a cost of 14 cents per hive. This is treated with two coats of paint, and will last for years, and is absolutely weather-proof. All this is at a cost of 39 cents per hive exclusive of paint and nails. Can you beat it?—E. M. Barteau, Suffolk County, N. Y.

The first carload of comb honey sold by the South Idaho and East Oregon Honey Producers' Association contained three grades, which brought \$6.50, \$6.25, and \$6.00 per case, respectively. The carload sold for a total of \$8,000. The Association expects to send out 40 carloads of honey this season. The third cutting of alfalfa yielded quite a flow of honey in September, which is somewhat unusual, as last year the honey season was pretty much over early in August.—George W. York, Spokane County, Wash.

We are not in sympathy with V. V. Dexter of this State, page 606. There is far more range and market in this locality than there are bees to fill. We can remember when a certain orange-grower of California brought suit against his neighbor for allowing his bees to trespass in his orange grove.—J. H. Clark, Snohomish County, Wash.

I am a novice at beekeeping, but have had fine luck this (my second) year. I increased from 2 to 13 stands artificially, and safely introduced three-fourths of my Italian queens, besides taking from one stand 2 natural swarms, 60 finished sections of white spring honey and 40 of the dark later honey.—L. W. Derrin, Lane County, Ore.

There is no honey in this section, and no prospect for clover next year, as for two years it has been killed by drouth. Foul brood is everywhere, and many bees are without winter stores. The inspector is in this county today, and we hope for some relief.—M. L. Brewer, St. Joseph County, Mich.

We have taken a crop of about 5,000 pounds in two yards, and the Government reports a crop of over a million pounds in the province, with about 14,000 colonies.—H. W. Sanders, Sturgeon Creek, Manitoba.

I had two acres sowed in sweet clover last fall, and had a very good stand. I came home too late from "war" to cut the clover, and the bees surely had a harvest.—C. J. VanNieda, Berks County, Pa.

I successfully introduced a hybrid queen with a Jay Smith introducing cage, to a laying-worker colony that had been long queenless. The cage is fine.—F. M. Carey, Lake County, Ill.

SOME years ago there was considerable criticism and perhaps a good deal of sport, or at least attempted sport, in regard to demoniacal possession. Some learned instructor (?) , I do not know but he came from Germany (I think very likely he did), informed us that humanities in olden time were afflicted with epileptic fits, much as they are now—perhaps more so—and the people got an idea that certain persons were “possessed of devils,” when in reality they were either the subjects of fits or had gone crazy; and the idea was scouted that Satan ever took possession of the soul and heart of a human being. Of late years I have heard but very little about it. I think that Bible readers and these different organizations that have been disseminating millions of bibles and testaments generally accept the Bible as it reads. A perusal of our recent daily papers, it seems to me, ought to convince any one that “devils” (or something else) *do* get hold of men and women—yes, and even *girls* 16 years of age, as appears from the following item which is taken from the *Cleveland Plain Dealer*.

DROWNS WIFE IN POOL

MAN MARRIES GIRL, 16, WEEK AFTER, SAYS SHERIFF. Pinckneyville, Ill., Sept. 8.—William Wrolen, 29, a railroad employe, is said to have confessed today to Sheriff Thimmig that on July 8, while swimming, he knocked his wife unconscious and held her under water until she drowned.

Two of his three children were playing on the bank of the stream at the time, according to the sheriff.

A week later Wrolen was married to Mary Brown, a 16-year-old girl, who also was arrested.

Of course, I do not know how much that 16-year-old girl was at fault in this terrible tragedy. She may have thoughtlessly and possibly innocently invited the attention of that wicked man. On the other hand, he may have started the hellish work by first casting admiring glances at that young girl, as in our second text. Years ago John B. Gough said something like this in one of his lectures. It happened somewhere in his travels that he caught sight of a sot who had fallen into a ditch; and while Mr.



Your adversary the devil, as a roaring lion, walketh about, seeking whom he may devour.—I PETER 5:8.

Whosoever looketh on a woman to lust after her hath committed adultery with her already in his heart.—MATT. 5:28.

And they come to Jesus, and see him that was possessed with the devil, and had the legion, sitting, and clothed, and in his right mind.—MARK 5:15.

Gough stopped and looked on the poor wretch he voiced his feelings something as follows: “But for the grace of God, there lies John B. Gough.”

Now, dear friends, what I am going to say seems pretty harsh and severe, and I suppose that many of my friends will utter a vehement

protest; but when I saw that clipping in the papers I felt like saying much as Gough did in thinking of that awful wicked man. “But for the grace of God, there lies A. I. Root.” This man had been married several years, for he had three children. Two of them were at the time playing on the bank of the pool. The above affair was, no doubt, deliberately planned beforehand. He persuaded the good, faithful mother to go in bathing with him. He thought that in this way he could escape punishment by pretending that she was drowned by accident; and he planned in some respects with much ingenuity, for Satan does have a certain kind of wisdom when he gets his victim fully in his clutches. But, oh, dear me! the guilty wretch forgot about the all-seeing eye of the great God above. If Satan showed wisdom in this part of the program, he certainly lacked it in urging that man to rush ahead and marry that poor child (for so he might call her) within *just one week*. Did he or she think they could ever be happy after such a crime? Poor deluded mortals! I do not know anything further about the parties than what is told in the above brief sketch; but I imagine that in one brief week *more*, both of them must have bitterly regretted their folly. Without question, in one week or less this poor man found out that this silly girl of 16 years could in no possible way take the place of the poor faithful and loving real mother in the care of those three children. Of course I have never committed any such *crime*, nor even *contemplated* such an act in my encounters with Satan; but I do know something of the remorse this man must have felt. Hundreds and perhaps thousands of criminals have committed suicide in order to escape

this remorse and the awful stings of conscience. And do they escape it? Who can tell? It is suggested by the *Sunday School Times*, and I think by some other religious periodicals that there is quite a disposition now to make fun of the idea of *hell*. My friends, there is not only something like the hell the Bible mentions in the life to come, but there is a hell here on earth that is unspeakably impossible to describe. Ask this man Wrolen about it, and I am sure he will tell you I am right. Why did he confess at all? Well, my impression is that the torture of a guilty conscience was such that he could stand it no longer. Perhaps he thought confession might make him feel better. Perhaps he had decided that the extreme penalty of the law and taking the electric chair would be a welcome change and a relief from the torture he was enduring.

As soon as this article is in type I am planning to mail it to William Wrolen, Pinckneyville, Ill.; and I want to call his attention to the fact that there is relief, even for such as he is. "Behold the Lamb of God that taketh away the sin of the world."

Some of my readers may object; and perhaps they are the ones who urge that he should suffer the full penalty of the law; and, in fact, I am inclined to think that humanity would be better off if he not only consents but requests that he be punished according to the laws of the land. From what experience I have had, I think it possible for him to go to the electric chair rejoicing—rejoicing *because* the awful burden has been lifted from him, and that the dear Savior has really "paid the price and set him free."

Our soldiers went to war, and bled and died for the salvation of the nations of the world. This man can go to his death in a similar way in order that married men and young girls in the future may be warned of the consequences of something that starts with what many people would say is a mere trifle. On page 679 of our last issue I published a warning from a poor suffering wife; and now I hope this warning will meet the eyes of a great lot of young girls 15 or 16 years old. Just now the boys and girls of our land and other lands have gotten hold of a sort of spirit of adventure. They crave excitement. A girl of 15 or 16 may innocently laugh and joke with a married man, and it may even go on until there is something more than just a casual acquaintance. The mothers and fathers of our land should be awakened to the responsibilities that rest on them. Watch out for your young girls.

While I write, September 11, our county fair is going on here in Medina. I went over there a few minutes yesterday. To tell the truth, I was more anxious to study humanity, especially the girls and boys of our county, than I was about anything else. One of the first things that met my gaze was the advertisement of a gypsy fortune-teller; but, come to think of it, she did not call herself a gypsy. It was some foreign name, and the notice was so worded as to attract the attention of girls especially; and the worst part of it was a whole crowd of girls in their teens tiptoeing just to see over the others' shoulders in order to look at that fortune-teller and hear what she had to say; and from their giggling I gathered that she knew how to "rope them in." I turned around in disgust; but on the other side of the way a similar fortune-teller was holding forth. I am not sure, but I think there were three of them on the fairground, and all three were apparently doing a tremendous business. By the way, some time ago in the city of Cleveland there was an ordinance passed forbidding fortune-telling, and every little while we hear of fortune-tellers being arrested. Will somebody tell me if this ordinance is still in force in Cleveland and other cities? And will the managers of our Medina County Fair "sit up and take notice," and go themselves and see what sort of entertainment is being permitted here in this county where the Y. M. C. A. seems to be ahead of almost every county in Ohio? And how about the Y. W. C. A.? Am I overdoing the matter in regard to the importance of keeping a check on the amusements now offered for our boys and girls? Much has been said about safeguarding the boys; but how about the girls? How about this unfortunate girl in our sister State of Illinois? How much was she to blame in this terrible tragedy that deprived three innocent children of a mother? We learn from the above clipping that she was arrested.

A few days ago Wynne Boyden, one of our grandsons, paid \$15.00 for a flight of 15 minutes in an aeroplane at Atlantic City; and while I dictate these words a flying-machine on our fairgrounds is carrying passengers. Another young relative, 16 years old, a cousin of Wynne, told me he would give \$10.00 for a ride of 10 minutes in the flying-machine. Said machine is performing stunts—looping the loop, etc., and it has just set the young boys wild. Now, if the boys want to take a flight, and have the money they earned to pay for it, perhaps there is no great objection; and even if a girl, 16 years old, should catch the craze

to fly, and even if she should lose her life by so doing, it would be a *thousand times better*, if lost in that way, than to be even "contributory" in leading some married man, especially a man with a family, out of the straight and narrow path, that leads from earth to heaven.

In closing let me once more refer to that terrible crime. Some of you, perhaps, have tried the drowning of kittens to get rid of them, or perhaps some other animals, and have witnessed their dying struggles. I know it is an awful thing to talk about; but I want to have my audience get a glimpse of that man's act that may prove a warning. This man persuaded the poor faithful wife, whom he had promised before God and man to love and protect and cherish, to go (very likely against her wishes) in bathing with him. Then he struck her a cruel blow—his poor, defenseless wife, the mother of his children—and then deliberately (O God, help the whole wide world to get a fair view of what Satan may lead man to do) held this poor, weak, defenseless woman under the water—no doubt, in spite of her struggles—until life was extinct and her heart had ceased to beat. And just here comes, perhaps, the worst of all. After that cowardly and awful act he (within a week) married that young girl. How about the parents of that girl? Where were they? And how about the State of Illinois? I shall have to confess my ignorance, but just now it is my impression that a girl 16 years old can not legally get married here in Ohio. I know they did, some 50 years ago; but if I am right our State saw the folly, as everybody else did, of allowing 16-year-old girls to get married. It has sometimes been suggested to me, and I do not know but the suggestion came from the Devil himself, that I had better "let the world wag" on as it will, for all I can do or say will not make very much difference anyway. But look here, my friends, another and better spirit says, "He that converteth the sinner from the error of his ways shall save a soul from death and shall hide a multitude of sins."

TALL OAKS FROM LITTLE ACORNS GROW.

One of the pleasant things of my old age, and perhaps I should also say one of my "happy surprises," is to hear people remark (and those whom I had supposed to be entire strangers) something as follows:

"Years ago I used to read your little bee journal, and made quite a success with bees"; or, "When I was just a kid we took your journal, and I used to read and enjoy the Home papers"; and I think a few have

added that my talks when the Home papers first started had considerable to do with shaping the future life of a boy just merging into manhood. With this preface I want to call attention to what our good friend Burbank said on page 612 of our September issue: "In fact, I think you are the one who encouraged me to start bee-keeping in New England years ago."

Well, after reading that I had a big laugh. And then I could understand why it was that friend Burbank, who is such a busy man, should reply in such a friendly way to all my letters to him.

And just now comes another of my pleasant surprises along this line. It is a letter written to my son Ernest.

I have yours of Aug. 28, and the sentiment expressed all the way thru coincides exactly with my own. I know that your father in the early days was interested in the anti-saloon movement. Dr. Russell has on several occasions mentioned how your father came to the rescue when funds were needed to develop the work.

About 35 years ago I used to buy supplies from your father when I lived at Gilbert, Pa. The last year I was on the farm I raised a ton and a half of honey, the receipts for which put me thru the Eastman Business College; and I have always had a pleasant recollection of bees, and also of the limited dealings with your father.

I followed several lines of business till 1892, at which time I traveled for a Wilkes-Barre tinware house, and traveled continuously for five years and two months, during which period I saved up sufficient funds to go into the five and ten cent business.

Last year the Kresge Company did over \$36,000,000 of business. This year, nothing unforeseen occurring, we shall do over \$40,000,000.

If not this fall, I hope some time next year to motor to your headquarters, make your acquaintance, and, incidentally, learn more about bees.

Very sincerely yours,

Detroit, Mich., Sept. 5.

S. S. KRESGE.

If our readers will now turn back to page 222 of Gleanings for March, 1917, they will find there a little item in the temperance column, headed, "He Did Not Scare Worth a Cent." This man Kresge was an enthusiastic temperance worker when Michigan was voting dry. In fact, he started out by making a contribution of \$10,000. Perhaps you all know about his "chain" (toward 200, altogether, in various cities) of five and ten cent stores. Well, a Milwaukee brewer, thinking he could scare Mr. Kresge, and taking it for granted, as all brewers do, that the god he worshipped was only dollars and cents, this brewer suggested that the wets might turn in and boycott his chain of stores; but it seems, to use a slang expression, the brewer found out he had "got the wrong pig by the ear," for here is the reply that Mr. Kresge sent:

"Yes, I put \$10,000 in the Wayne County dry fight; and since receiving your letter of inquiry I have added \$10,000 more."

Let us now go back a little.

Altho Mr. Kresge does not say so, I think it is quite likely that the man writer of

the letter took Gleanings when the five and ten cent counter was my particular hobby. And, by the way, I have always had a kindly feeling for five and ten cent stores ever since that experience of mine. As an illustration, a good many times a young couple just married would come in, and the young wife would want a lot of things while they had only a limited capital. She would pick up the different articles listed at five and ten cents and say, "Oh! that is just what I have wanted so long, and it is only ten cents—just look at it, John." And they would go on in that way and fill up a basket with things needed in the new little household, and have some money left besides. I confess I was reluctant to give up my hobby of "useful things for a small amount of money"; but it came to a point where I should have to neglect the bee and honey business or let the "counter store" go. Now, Mr. Kresge has kept right on year after year, and he tells us in conclusion (without any idea that I might take the liberty of publishing it), that his sales now go away up into the millions. Of course, he does not make any such profits as they do in ordinary stores; but he does a lot of good, in furnishing needed articles at a very small margin of profit. I think I used to sell articles for 10 cents that cost me as much as 9½ cents by the hundred or by the gross; and may God be praised that *some* of our millionaires, at least, are laying up "treasures in heaven" as well as here on earth. Somebody has told me (I can not remember who) that this man Kresge with his abundant means and untiring enthusiasm did more to make Michigan dry than probably any other one person.

Here is an important point in closing that I think it might be well for all young men to note. The man who contributes liberally—perhaps we might say at times extravagantly—for temperance, foreign missions, or the spread of the gospel, gains the confidence of the people; and the "bread" that was "cast on the waters" of humanity without much thought of any financial return comes around again, "after many days."

ELECTION DAY NOV. 4TH. DON'T FORGET IT.

HE WHICH CONVERTETH THE SINNER FROM THE ERROR OF HIS WAY SHALL SAVE A SOUL FROM DEATH, AND SHALL HIDE A MULTITUDE OF SINS.

My good friends, if this meets your eye before election day (and I hope and pray that it may), by getting your vote on the side of righteousness you may "save many

a soul from death"—yes, perhaps thousands and hundreds of thousands in the great unknown future, by voting not only for Ohio dry but for the great United States and *finally* for the great wide world. Yesterday, Oct. 15, it was my pleasure to listen to W. J. Bryan. He reminded us that our own beloved State of Ohio started the Woman's Crusade in 1874. It also started the W. C. T. U., the Anti-saloon League (I helped), and that inasmuch as this same Ohio seems to be central, not only geographically but also in moral and spiritual matters, that it behooves us now as never before to be on hand and vote for prohibition, "bone dry" and *everlasting*. Everybody is watching Ohio. The liquor interests, in their greed for money (and more money), are fighting desperately, for they recognize they are in the last ditch. They are leaving no stone unturned. They have hired the biggest legal talent with their millions, and are resorting to every sort of trickery, misrepresentation, and falsehood, as you may see by their advertisements in our daily papers just now. If they should win, not only will the saloons come back, but we shall have beer, near beer, and "nearly" every other kind, doled out over the counter at every corner grocery in the land. If you have not already compared the results under both wet and dry legislation, just look it up. Not only are our workhouses empty, but our infirmaries and asylums have the number of inmates cut down until it would almost seem that every voter in our land must be without senses, or idiotic, if he votes *wet*.

Once more, may God help us in the conflict. Mr. Bryan suggests that on election day the schools should be closed. The children should be fixed up in their best, and parade the streets with banners reading "Vote for us," or something of the sort. Furthermore, he said he hoped in the future to see things made as easy for farmers (instead of going several miles to the voting precincts) as for those who live in towns. If our Government can afford to send a man to carry a postal card to a farmer every day in the year, can not Uncle Sam also afford to send somebody to get the vote of the farmer lest he say again and again, "I forgot all about its being election day"?

Once more, we on the dry side are making every effort for the physical, mental, and spiritual uplift of the unborn for ages to come. What are the wets working for? Just money, more money, and nothing but money. Can anybody dispute my word? Now may God help *you* to be on hand, and be sure also, that you vote right.

HELPS FOR DEAF PEOPLE.

On page 112 I told you about the Gem earphone, made at 47 West 24th St., New York. Since then I have purchased of the Earphone Co., 43-45 West 34th St., New York, an instrument that pleases me still better. The cost is about the same. Perhaps I should mention that these two companies have been hard at work, each of them, in making improvements; and they have been kind enough to supply me with their latest inventions. At one time I thought that the Gem was ahead, and at another the Mears; but the latest improvement by the Mears people has been what they call a "concentrator;" and at the present time, Oct. 1, 1919, the Mears concentrator is a great help in hearing a sermon or a lecture. During the Sunday-school exercises the only way I knew some of the speakers were talking was by watching the motion of their lips; without the instrument I could not hear a sound; but by pointing the concentrator directly toward the speaker, and being about the right distance away, I could hear every word without very much trouble. Our janitor has very kindly furnished me a little stand on which to rest the instrument; and this stand I can place at the proper distance and in the best position to hear. Of course, I dislike making myself so conspicuous, as almost every one would; but it enables me to hear the sermon when I could not otherwise. When it comes to the Bible class and the Thursday-evening prayer meeting I have this same little light stand and a chair back of it.

For the benefit of others who are afflicted like myself, perhaps I should explain a little further.

To get the best results, the earphone is placed up to my *left* ear, with my right hand also over my *right* ear so as to collect the sound. I seldom use the instrument unless I go to a meeting of some sort. Ordinarily by being within a yard or two of the speaker, with my right hand over my right ear, I get along very well.

Just one thing more in closing:

With all the instruments I have ever tried (and I have tested some that cost as much as \$75.00) I have never found anything that sounds exactly like the natural voice. There is always something you might call an echo—a disturbing racket much as you will notice in the ordinary telephone; and increasing the power of the instrument does not help—in fact, it makes matters worse; and in order to catch every word, I keep moving the earphone closer or further away. If a speaker gets to talking too loud, I am obliged to hold the in-

strument quite a distance from the ear. A good friend of mine down in our Florida home has one of the best instruments made, but he says it *now* gives him no help whatever. He says that it, of course, makes the sound of the voice louder, but so much mixed up, he can not distinguish anything.

I believe that most instruments are sent out now on free trial. I would not advise you to invest in anything where they want five dollars or a similar sum, not to be returned if the instrument is no help to you.

BURBANK'S EARLIEST TOMATO.

I did not notice Burbank's description of the above tomato until after we had tomatoes planted out in our garden. When I planted seeds of the Burbank I think that a few of the tomatoes in the garden showed blossoms; but, notwithstanding this, my first ripe tomato came from the Burbank. It is a smooth round tomato, fine quality; but being so extra early the tomatoes are not very large.

I now wish to mention another of which I can not give you the name. Some one of my good friends in writing me inclosed a few seeds and said their families were greatly pleased with them. I think he said he got the seed of the Henry Field Co., Shenandoah, Iowa; but I do not find anything in his catalog that describes it unless it is the Golden Beauty. Well, this particular tomato kept spreading out where it was not put on a trellis; and even where it was, until it almost threatened to cover the whole garden. There were green tomatoes in great abundance; and Mrs. Root began wondering whether they would have time to get ripe before frost. Well, they kept on growing bigger and bigger, and finally turned white; and after a while they took on a golden yellow. They were not smooth and handsome in shape—in fact, they were twisted all around until some look like three or four tomatoes all hitched together. One of them actually weighed $2\frac{1}{4}$ pounds. After the first one we had quite a few great, big Golden Beauties; almost perfectly round and smooth; and today (Oct. 15) the ground is yellow with them. Our neighbors are all supplied, and there the tomatoes are, going to waste. I think they are as nice tomatoes as I have ever tasted unless it is the little yellow pear tomato. But others do not agree with me. They say they like the red ones best. But I feel, however, that these tomatoes are of great value because they are so tremendously productive. I think I have procured nearly if not quite a peck basket from one picking of a single vine.